Psychological Processes

in

Adversarial Growth

by

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Abstract

This thesis set out to investigate some of the variables associated with, and the processes and mechanisms of, positive change following trauma and adversity, or adversarial growth, in diverse populations.

A systematic and comprehensive review of the literature (**Chapter 2**) identified the state of knowledge, and pointed to a number of salient directions for future research. Some of these directions were pursued in the subsequent empirical chapters.

Five empirical chapters (**Chapters 3 –7**) examined a range of variables and processes in adversarial growth, using a variety of populations. Using two large student samples, it was found that emotion-focused coping mediated the association between subjective distress and adversarial growth, and that emotional intelligence was a potentially key variable in the role of emotions in adversarial growth (**Chapter 3**).

A longitudinal study of people who had been severely traumatised and were suffering chronic psychological distress revealed that the experience of positive change predicted lower psychological distress and negative change six months later (**Chapter 4**).

Vicarious processes in adversarial growth were investigated in therapists, and it was shown that the working alliance may be a core channel through which the process of vicarious growth operates (**Chapter 5**).

Extending this focus on vicarious processes, in two samples of disaster workers, and funeral directors, it was shown that psychosocial variables were more salient in their associations with adversarial growth than professional experience variables. Specifically, the role of cognitive processing was emphasised, together with an exploration of the novel area of death attitudes (**Chapter 6**).

A more explicitly existential focus, using three samples of churchgoers, members of the general population, and funeral directors, addressed the role of Yalom's ultimate existential concerns and adversarial growth. Negative death attitudes were shown to be consistently associated with more negative changes and fewer positive changes, but the associations with negative changes were mediated, in some instances, by the presence of meaning in life and satisfying close relationships, consistent with theoretical predictions. Further, aspects of the organismic valuing theory of growth through adversity were tested, and broadly supported (**Chapter 7**).

The concluding chapter (**Chapter 8**) reviewed the main findings from the thesis, identified ongoing questions from the literature, and indicated salient directions for research, including an emphasis on the clinical applications of adversarial growth.

Chapter 1 Thesis Introduction

1.1 Project background and aims

This thesis represents the culmination of a number of my diverse interests and experiences. The topic of adversarial growth, or how people grow and change positively through the struggle with trauma and other adversity, was inspired by my search for a subject broad enough to encompass my interests, yet defined enough to provide a clear focus and outcome.

In the final year of my undergraduate degree, I had decided to pursue an academic career, and was searching for a thesis subject area that would be able to capture and maintain my interest for at least the next three years. I sought a topic that would allow me to consider the nature of psychological trauma and people's reactions to it (a subject inspired by discussions with my esteemed colleague Roger Bretherton, and my reading of the superb van der Kolk, McFarlane, and Weisaeth (1996) *Traumatic Stress: The Effects of Overwhelming Experience on Mind, Body, and Society* volume), but to consider this from a perspective of the potential value to be found in human suffering (a topic inspired by my extensive reading of the Russian novelist, Fyodor Dostoevsky; see Linley, 2000; Linley, 2003).

Further, I was also keenly interested in psychotherapy and human change processes more generally; the role of meaning, religion and spirituality in people's

lives; and was very much aware of the profound influence that existential philosophy and psychology had had on me. Also, all this had to be achieved within a positive psychological framework, since as one of the earliest British proponents of this movement, I was keen to develop my interests from this perspective (see e.g., Linley & Joseph, 2004a; Linley, Joseph, & Boniwell, 2003).

It was germane that at this time Tedeschi, Park, and Calhoun (1998) had recently published their excellent volume *Posttraumatic Growth: Positive Changes in the Aftermath of Crisis*, and this, together with further discussions with Roger, fused my interests in the area. My ideas for doctoral research were then shaped in this direction, leading me to conduct my third year undergraduate dissertation research on adversarial growth in therapists as a result of their work with trauma clients (Linley, Joseph, & Loumidis, in press). It was at this stage that I identified Stephen Joseph as my first choice supervisor, one of the few people in the country who was knowledgeable about my areas of interest, and most important of all, who I was confident would work with me in a way that helped me develop to my full potential. Looking back, even with this optimism, I would not have believed we could have achieved so much together in such a short time.

1.2 Overview of the thesis

I commenced work on the thesis in September 2001, and began with a comprehensive review of the literature (see Chapter Two), which has been published in the *Journal of Traumatic Stress* (Linley & Joseph, 2004b), and was

consistently the most downloaded article from the *Journal of Traumatic Stress* website from its publication (February 2004) until the time of writing (September 2004). This review indicated a vast range of areas for future research, and suggested that "adversarial growth" (as we collectively labelled the phenomenon in the review paper) was indeed a fertile area for study. I therefore designed studies that were aimed at tackling different areas within the arena of adversarial growth, to answer what I believed to be some of the more interesting questions. Importantly, I did not restrict the focus of my enquiries to just the positive changes that people reported, but also included assessment of various measures of negative changes, being very mindful of the need for balanced consideration of both positive and negative experiences (Linley & Joseph, 2003; Linley & Joseph, 2004c).

Chapter Three presents two studies that examine core psychosocial variables (subjective experience, coping, social support, emotional intelligence) and their associations with adversarial growth. The inclusion of emotional intelligence was novel for research in this area, and pointed to both theoretical and empirical directions for future research. However, two key limitations of this study were its use of student participants and its cross-sectional design.

These were something I tried to address in Chapter Four, which reports a longitudinal study with a sample of people who had been severely traumatised, and were recruited through ASSIST, a charitable support organisation for people who have experienced trauma. The findings here pointed to the value of positive

changes at any time in one's recovery from trauma, with earlier positive changes predicting better psychological outcomes six months later. This led me to wonder about the possible effects of working therapeutically with survivors of trauma and other adversity on therapists, and to revisit my earlier dissertation research (Linley et al., in press).

Chapter Five presents the findings from this work, where a large sample of therapists was surveyed to document this phenomenon more fully, and to explore the correlates of adversarial growth in therapists. Here I drew from the psychotherapy research literature, and focused on core therapeutic variables, including therapeutic training and practice orientation, empathy and the therapist's working alliance, as possible factors that would influence the therapists' experience of adversarial growth.

This theme was again followed in Chapter Six, where I focused my attention this time more squarely on the role of death and death attitudes in the experience of adversarial growth. This chapter describes two studies with disaster response workers and funeral directors, and presents what I believe to be the first work in the area to document adversarial growth in these populations.

Chapter Seven explores the death motif more fully, and adopts an explicitly existential perspective, as I explore the role of three of Yalom's (1980) four ultimate existential concerns (death, isolation, and meaninglessness) and their associations with adversarial growth. This chapter draws from three large samples

to tackle the question from a range of converging perspectives: churchgoers, members of the general population, and funeral directors.

Chapter Eight summarises and discusses the major findings and brings the empirical work back to the context of understanding the psychological processes involved in adversarial growth. I conclude that work of this nature is central to understanding human beings, and further is an integral part of positive psychology, since it speaks squarely and clearly to the triumphs of the human spirit over the fundamental givens of our existence.

Chapter 2: Positive Change following Trauma and Adversity: A Review

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2.1 Introduction

Positive changes following adversity have long been recognized in philosophy, literature, and religion (Tedeschi & Calhoun, 1995; Tedeschi et al., 1998). They have been reported empirically following chronic illness, heart attacks, breast cancer, bone marrow transplants, HIV and AIDS, rape and sexual assault, military combat, maritime disasters, plane crashes, tornadoes, shootings, bereavement, injury, recovery from substance addiction and in the parents of children with disabilities.

These positive changes share the common factor of struggling with adversity, hence we refer to them collectively as *adversarial growth.* It is through this process of struggling with adversity that changes may arise that propel the individual to a higher level of functioning than that which existed prior to the event. These positive changes have been labelled posttraumatic growth, stress-related growth, perceived benefits, thriving, blessings, positive by-products, positive adjustment and positive adaptation. Throughout this chapter we will use the term adversarial growth to refer to these positive changes collectively, but will use specific terms when referring to literature that has used these terms.

Studies of adversarial growth are an important area of research for several reasons. Focusing only on the negative sequelae of trauma and adversity can lead to a biased understanding of posttraumatic reactions. Any understanding of reactions to trauma and adversity must take account of the potential for positive as well as negative changes if it is to be considered comprehensive. Earlier reviews have addressed this literature (Affleck & Tennen, 1996; Calhoun & Tedeschi, 1998; McMillen, 1999; Park, 1998). However, recent research has changed what is known about this phenomenon. There is now a need to establish more clearly the variables that are associated with adversarial growth. This review provides a comprehensive summary of the published empirical data, allowing researchers to quickly and easily compare findings across different studies.

From an applied perspective, clinicians should be aware of the potential for positive change in their clients following trauma and adversity. Positive changes may be used as foundations for further therapeutic work, providing hope that the trauma can be overcome (Calhoun & Tedeschi, 1999; Linley & Joseph, 2002; Tedeschi & Calhoun, 2004a). Interventions for posttraumatic stress disorder typically do not take account of the potential for adversarial growth. Although the research findings are preliminary, early indications suggest that the experience of growth is related to lowered levels of distress (e.g., Frazier, Conlon, & Glaser, 2001), hence the facilitation of adversarial growth may be considered a legitimate therapeutic aim (Linley & Joseph, 2002).

In this chapter, we briefly consider the measurement of adversarial growth, before reviewing those studies that document adversarial growth empirically, in order to review prevalence rates. We examine studies that have investigated the variables associated with adversarial growth, with a particular focus on the nature of the relation between growth and distress. We review studies that have reported the temporal course of adversarial growth. Finally, we consider the potential applications of our findings, and suggest how future research might best proceed to promote our understanding of the structure, process, and potential clinical applications of adversarial growth.

2.1.1 Literature Search Strategies

Three strategies were used to establish the literature to be included in the review. First, three major databases - PsycINFO, PILOTS [Published International Literature On Traumatic Stress], and Ingenta (including Medline) - were searched for peer-reviewed published literature (excluding dissertations) during March 2002 using the specific search terms *posttraumatic growth*, *post-traumatic growth*, and *stress-related growth*. General searches were additionally carried out for the terms *thriving*, *perceived benefit*, *perceived benefits*, *perception of benefit*, *positive adjustment*, and *positive adaptation*. These latter terms have been used to describe processes and outcomes that are consistent with, but not exclusive to, adversarial growth. The search results for these general terms were screened for their relevance to the review. Non-empirical (i.e., theoretical, literary review)

publications were excluded. References derived from this first strategy are marked with an asterisk (*) in the reference list.

Second, these identified sources were checked for references to other publications containing any of the search terms. These publications were then collated, and this process repeated until no new references were derived. Third, references were included that were known to the authors and were directly relevant to the review, but that had not otherwise been detected using the previous search strategies. In this way we aimed to select only studies where adversarial growth was a substantial focus of the reported empirical research. Previous reviews (Affleck & Tennen, 1996; Calhoun & Tedeschi, 1998; McMillen, 1999; Park, 1998) covered a number of studies that reported some adjunctive positive outcomes following adversity. However, these were excluded from the present review unless they met the search criteria described above. These strategies collectively identified 40 empirical studies as we report below (see also Table 2.1). One report could not be obtained (Peltzer, 2000) and so is not included in the review.

Table 2.1. Summary of Studies Examining Adversarial Growth

Study		Event	Gender	*n*	Measure	Mean (SD)	Prevalence
Posttraumatic Growth Inventory							
Best, Streisand, Catania, & Kazak (2001)		Parents of children with pediatric leukemia	Mixed	113	PTGI	n/a	
Calhoun, Cann, Tedeschi, & McMillan (2000)		Various	Mixed	54	PTGI	76.5 (22.0)	
Cordova, Cunningham, Carlson, & Andrykowski (2001)		Breast cancer	Women	70	PTGI	64.1 (24.8)	
		Healthy comparison	Women	70	PTGI	56.3 (26.3)	
Polatinsky & Esprey (2000)		Bereaved of child	Male	18	PTGI	79.72 (19.50)	
			Female	49	PTGI	83.47 (20.21)	
Snape (1997)		Accident / assault	Male	40	PTGI	55.43 (18.14)	
			Female	13	PTGI	52.15 (25.59)	
Tedeschi & Calhoun (1996)	#1	Various	Male	199	PTGI	67.77 (22.07)	
			Female	405	PTGI	75.18 (21.24)	
	#3	Various	Male	55	PTGI	70.25 (21.87)	
			Female	62	PTGI	81.60 (21.09)	
Weiss (2002)		Breast cancer	Female	41	PTGI	60.21 (18.81)	97.6%
			Husband	41	PTGI	46.00 (22.83)	87.8%
Epel, McEwen, & Ickovics (1998)		Laboratory stressor	Women	58	PTGI – M	n/a	
Milam, Ritt-Olson, & Unger (2004)		Various	Mixed	435	PTGI – M		29.0%
Maercker & Langner (2001)		Medical illness / Various	Mixed	141	PTGI / G	48.68 (21.78)	

Stress-Related Growth Scale						
Park, Cohen, & Murch (1996) #1	Various	Female	344	SRGS	51.50 (n/a)	
		Male	162	SRGS	45.73 (n/a)	
#2	Various	Mixed	160	SRGS	52.87 (21.40)	
#3	Various	Male	83	SRGS	45.58 (n/a)	
		Female	173	SRGS	54.88 (n/a)	
		Mixed	142[a]	SRGS	54.57 (20.95)	
King, Scollon, Ramsay, & Williams (2000)	Parents of Down Syndrome child	Mixed	87	SRGS-M	n/a	
Koenig, Pargament, & Nielsen (1998)	Medical illness	Mixed	564	SRGS-S	21.7 (7.5)	
Pargament et al. (1998)	Oklahoma City bombing residents	Mixed	296	SRGS-S	10.43 (8.31)	
	Various	Mixed	540	SRGS-S	18.41 (7.47)	
	Medical illness	Mixed	551	SRGS-S	21.69 (7.48)	
Pargament, Koenig, & Perez (2000)	Various	Mixed	540	SRGS-S	18.41 (7.47)	
Armeli, Gunthert, & Cohen (2001)	Various – adults	Mixed	447	SRGS-R	n/a	
	Various – students	Mixed	478	SRGS-R	n/a	
Maercker & Langner (2001)	Medical illness / Various	Mixed	141	SRGS-S / G	13.57 (7.66)	
Perceived Benefit Scales						
McMillen & Cook (2003)	Spinal cord injury	Mixed	42	PBS[1]		79%
McMillen & Fisher (1998)	Various	Mixed	289	PBS[1]		
Changes in Outlook Questionnaire						
Joseph, Williams, & Yule (1993)	Ship sinking	Mixed	35	CiOQ	46.97 (9.12)	44 – 94%

Illness Cognition Questionnaire						
Evers, Kraaimat, van Lankveld,	Multiple sclerosis	Mixed	167	ICQ	15.53 (4.46)	
Jongen, Jacobs & Bijlsma (2001)	Rheumatoid arthritis	Mixed	263	ICQ	15.20 (4.22)	
Thriving Scale						
Abraido-Lanza, Guier, & Colon						
(1998)	Arthritis / chronic illness	Female	106	TS		83%
Non-published growth measures						
Affleck, Tennen, Croog, & Levine	Heart attack	Male	287[b]	Single item		58.2%
(1987)			205[c]	Single item		59.5%
Davis, Nolen-Hoeksema, & Larson	Bereavement	Mixed	205[d]	Single item		3 – 42%
(1998)	Bereavement	Mixed	205[e]	Single item		3 – 41%
Frazier, Conlon, & Glaser (2001)	Sexual assault	Female	88[h]	17-items		20 – 80%
			97[i]	17-items		37 – 81%
			89[j]	17-items		37 - 72 %
			92[k]	17-items		39 – 76%
McMillen, Smith, & Fisher (1997)	Tornado	Mixed	42[f]	Single item		90.5%
	Shooting	Mixed	136[f]	Single item		76.3%
	Plane crash	Mixed	46[f]	Single item		54.6%
	Tornado	Mixed	39[g]	Single item		94.7%
	Shooting	Mixed	116[g]	Single item		69.2%
	Plane crash	Mixed	41[g]	Single item		35.0%
McMillen, Zuravin, & Rideout						
(1995)	Child sexual abuse	Female	154	Single item		46.8%
Schnurr, Rosenberg, & Friedman						
(1993)	Military combat	Male	540	MMPI	n/a	
Tennen, Affleck, Urrows, Higgins,						

& Mendola (1992)	Rheumatoid arthritis	Mixed	54	Five items	n/a	
Waysman, Schwarzwald, & Solomon (2001)	Combat	Male	348	45-items	n/a	
Qualitative growth measures						
Fontana & Rosenheck (1998)	Combat	Male	1198	Open question	n/a	
Fromm, Andrykowski, & Hunt (1996)	Bone marrow transplantation	Mixed	90	Interview		96%
King & Miner (2000)	Various	Mixed	118	Written essay	n/a	
Massey, Cameron, Ouellette, & Fine (1998)	HIV / AIDS	Female	n/a	Life story	n/a	
McMillen, Howard, Nower, & Chung (2001)	Chemical dependency	Mixed	65	Focus groups	n/a	
Parappully, Rosenbaum, van den Daele, & Nzewi (2002)	Parents of murdered child	Female Male	13 3	11 items + Interview		100%
Poorman (2002)	Adult abuse	Female	21	Interview		100%
Siegel & Schrimshaw (2000)	HIV/ AIDS	Female	54	Interview		83%
Thompson (2000)	Rape	Female	5	Interview		100%
Updegraff et al. (2002)	HIV infection	Female	189	Interview		n/a

Note. [1]Only PBS subscale scores have been reported, hence these are not included. [a]at 6 month follow up; [b]at 7 weeks; [c]at 8 years; [d]at 6 months; [e]at 13 months; [f]at 4-6 weeks; [g]at 3 years; [h]at 2 weeks; [i]at 2 months; [j]at 6 months; [k]at 12 months.
PTGI = Posttraumatic Growth Inventory (Range = 0-105); PTGI – M = Modified version of the PTGI; PTGI – G = PTGI German version (Range = 0-105); SRGS = Stress-Related Growth Scale (Range = 0-100); SRGS-M = Modified version of the SRGS; SRGS – S: SRGS (Short form) (Range = 0-30); SRGS – S/G = SRGS (Short form) German version (Range = 0-30); SRGS – R; Revised SRGS; PBS = Perceived Benefit Scales; CiOQ = Changes in Outlook Questionnaire (Range = 11-66, although only scores >44 indicate positive change); ICQ = Illness Cognition Questionnaire (Range = 1-24); TS = Thriving Scale; MMPI = Minnesota Multiphasic Personality Inventory. Scale ranges are reported where appropriate to allow interpretation of mean scores. Studies are organized by measurement scale (and alphabetically within each scale).

2.2 Measurement of Adversarial Growth

Seven instruments have been published that purport to measure adversarial growth. The Posttraumatic Growth Inventory (PTGI; Tedeschi, & Calhoun, 1995, 1996) has 21-items and five subscales that assess growth across the dimensions of relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. The Stress-Related Growth Scale (SRGS; Park et al., 1996) is a 50-item measure, with various test results suggesting that a single factor interpretation is most appropriate (Cohen, Hettler, & Pane, 1998). There is also a 15-item short form. The Revised Stress-Related Growth Scale (RSRGS; Armeli et al., 2001) has 43-items and eight subscales assessing affect regulation, religiousness, treatment of others, self-understanding, belongingness, personal strength, optimism, and life satisfaction. The Changes in Outlook Questionnaire (CiOQ; Joseph et al., 1993) is a 26-item measure of positive and negative changes. The Thriving Scale (TS; Abraido-Lanza et al., 1998) is a 20-item measure that uses modified items from the SRGS (15 items) and the PTGI (three items), together with two items developed by the authors. The Illness Cognition Questionnaire (ICQ; Evers et al., 2001) has three six-item subscales of which the first, Perceived Benefits, was relevant to this review. The Perceived Benefit Scales (PBS; McMillen & Fisher, 1998) consist of 30 positive change items and eight negative change items. The positive change items yield eight subscales: enhanced self-efficacy, increased community closeness, increased spirituality, increased compassion, increased faith in people, lifestyle changes, enhanced family closeness, and material gain. The negative change items are not scored, but

were included to avoid response bias. Associations with the PBS are not included in the review because only subscale scores, and not total scale scores, have been reported.

As noted, different measures of adversarial growth produce different numbers of growth dimensions (from one (SRGS) to eight dimensions (RSRGS; PBS)). However, the dimensional structure of adversarial growth remains an open question. For the purposes of this review, we treat adversarial growth as a unidimensional phenomenon.

2.3 Prevalence of Adversarial Growth

Only 12 of the 39 studies employed published measures that had also been used elsewhere. The remaining 27 studies typically used quantitative measures that had not been subsequently used, or qualitative measures such as focus groups or interviews (see Table 2.1).

Table 2.1 provides details of the 39 included studies. Mean scores are given to aid comparison where published measures have been used; otherwise we have given the prevalence rates of positive change reported, or calculated them where possible. These rates reflect the percentage of respondents endorsing positive change items, when respondents were selected from general population studies. None of the studies employed random sampling techniques; hence prevalence rates should be interpreted cautiously. Where a range of prevalence rates are

given, these reflect the range of endorsements for different positive change items. Prevalence rates for endorsement of positive items ranged from 3% for bereaved persons (Davis et al., 1998) to 98% for women with breast cancer (Weiss, 2002). The prevalence rates of 100% (Parappully et al., 2002; Poorman, 2002; Thompson, 2000) are not considered representative because these studies selected samples on the basis of respondents' reports of positive change, rather than through a non-biased sampling technique.

2.4 Variables Associated with Adversarial Growth

2.4.1 Differences by Event Type

It is potentially misleading to compare across different studies that have not used published instruments. However, tentative comparisons can be made where published instruments have been used. Mothers bereaved of a child scored highest on the PTGI (Polatinsky & Esprey, 2000), whereas the husbands of women with breast cancer scored lowest (Weiss, 2002). Only three studies reported growth outcomes by event type. Two of these effects were non-significant (Milam et al., in press; Park et al., 1996, Studies, 1, 2, and 3). McMillen et al. (1997) reported higher growth in survivors of a tornado, a mass shooting, and a plane crash, respectively. However, this finding can be explained by samples' proximity to the stressor. In the tornado sample, a pre-existing community was affected, and the sample was taken from this community. In the mass shooting sample, restaurant employees were sampled whether they were on site or not at the time of the

incident, as well as customers who were present, and local residents who were not present but heard the incident. In the plane crash sample, hotel employees were sampled, whether or not they were on site at the time the plane impacted on the hotel. Thus differences in growth scores may not be a function of event type per se. It is more likely that, as with traumatic stress (Briere & Elliott, 2000), it is the characteristics of the subjective experience of the event (e.g., helplessness, controllability, life threat), rather than the event itself that influence adversarial growth.

2.4.2 Cognitive Appraisal

Greater levels of perceived threat and harm are associated with higher levels of adversarial growth (see Table 2.2). However, there does not appear to be a consistently positive linear relation between the degree of trauma and growth. Fontana and Rosenheck (1998) and Schnurr et al. (1993) reported a curvilinear relationship between psychological benefits and traumatic exposure: benefits were stronger at intermediate, rather than high or low, levels of exposure. In terms of cognitive appraisal variables, awareness and controllability of the event were generally associated with higher levels of adversarial growth.

Table 2.2. Variables Significantly Associated with Adversarial Growth

Variables	Studies
Cognitive Appraisal	
Awareness	Park et al. (1996) #2
Control	Evers et al. (2001); Park et al. (1996) #2; Tennen et al. (1992)
Harm	Fontana & Rosenheck (1998); McMillen & Fisher (1998); Pargament et al. (1998); Park et al. (1996) #1; Tedeschi & Calhoun (1996)
Threat	Armeli et al. (2001); Cordova et al. (2001); Fontana & Rosenheck (1998); Fromm et al. (1996); McMillen et al. (1997)
Sociodemographic	
Age	Milam et al. (in press)
Age (negative)	Davis et al. (1998); Evers et al. (2001); Polatinsky & Esprey (2000)
Education	Fontana & Rosenheck (1998); Updegraff et al. (2002)

Gender (female)	Park et al. (1996) #1; Park et al. (1996) #3; Tedeschi & Calhoun (1996) #1; Tedeschi & Calhoun (1996) #3; Weiss (2002)
Income	Cordova et al. (2001); Updegraff et al. (2002)
Personality	
Agreeableness	Tedeschi & Calhoun (1996)
Conscientiousness	Tedeschi & Calhoun (1996)
Extraversion	Evers et al. (2001); Tedeschi & Calhoun (1996)
Hardiness	Waysman et al. (2001)
Neuroticism (negative)	Evers et al. (2001)
Openness to experience	Tedeschi & Calhoun (1996)
Optimism	Davis et al. (1998); Evers et al. (2001); Tennen et al. (1992); Updegraff et al. (2002)
Self-efficacy	Abraido-Lanza et al. (1998)
Self-esteem	Abraido-Lanza et al. (1998); Joseph et al. (1993); McMillen et al. (1995); Tedeschi & Calhoun (1996)

Coping

Emotion-focused coping	Maercker & Langner (2001)
Negative religious coping	Koenig et al. (1998); Pargament et al. (1998); Pargament et al. (2000)
Positive religious coping	Koenig et al. (1998); Pargament et al. (1998); Pargament et al. (2000)
Problem-focused coping	Armeli et al. (2001); Evers et al. (2001); Koenig et al. (1998); Maercker & Langner (2001)

Religion

Existential openness	Calhoun et al. (2000)
Intrinsic religiousness	Park et al. (1996)
Religious participation	Koenig et al. (1998); Milam et al. (2004); Tedeschi & Calhoun (1996)

Social Support

Social support received	Evers et al. (2001); Koenig et al. (1998)
Social support satisfaction	Park et al. (1996)

Cognitive Processing	
Cognitive processing	Calhoun et al. (2000); Cordova et al. (2001); Maercker & Langner (2001); Snape (1997)
Affect	
Positive affect	Abraido-Lanza et al. (1998); Evers et al. (2001); Park et al. (1996); Tennen et al. (1992)
Negative affect (negative)	Abraido-Lanza et al. (1998); Evers et al. (2001)
Psychological Distress	
Depression (negative)	Frazier et al. (2001); Updegraff et al. (2001)
Anxiety (negative)	Best et al. (2001)

Note. All associations are positive, i.e., the variable specified is associated with more growth, unless otherwise indicated.

2.4.3 Sociodemographic Variables

There have been suggestions that women tend to experience higher levels of adversarial growth than do men, but the evidence remains mixed (see Table 2.2). Studies with student populations reporting on a range of events (Park et al., 1996; Tedeschi & Calhoun, 1996), or women with breast cancer being compared to their husbands (Weiss, 2002), have found that women reported more growth than men. Between parents bereaved of a child, no differences were reported (Polatinsky & Esprey, 2000). However, this study used a much smaller sample size than others and showed a non-significant trend in the direction of women reporting more growth.

Younger respondents were generally more likely to report adversarial growth once a given level of developmental maturation was achieved (i.e. older adolescents were more likely to report posttraumatic growth, Milam et al., 2004). However, there are a number of potential confounds in age effects. Polatinsky and Esprey (2000) cautioned that their findings may have been skewed by outlier scores of two younger participants. The temporal proximity to one's own death (Davis et al., 1998) may mean that older people are more likely to be concerned about the imminence of their own demise, and so perhaps are less likely to report growth. A longer perceived duration of living with chronic illness may have prompted more benefit finding in younger people as they sought to adapt to their illness (Evers et al., 2001).

Two studies suggested that higher levels of education and income were associated with more adversarial growth. However, one of these (Updegraff et al., 2002) was conducted with participants of low socioeconomic status, meaning that "higher income" was closer to a national average, rather than higher income per se. The causal mechanisms of these relations are not clear, and it seems reasonable to suggest that they may be confounded with more pertinent psychosocial variables that have a clearer theoretical relation to adversarial growth.

2.4.4 Personality

Of the Big Five constellation, extraversion, openness to experience, agreeableness and conscientiousness were all positively associated with growth (see Table 2.2). Neuroticism appears to be negatively associated. Evers et al. (2001) replicated the association between extraversion and perceived benefits in people suffering from rheumatoid arthritis and multiple sclerosis, but this association was non-significant in a partial correlation controlling for neuroticism. The personality variables self-efficacy and hardiness were both associated with growth, although sense of coherence was not. People with higher self-esteem and who were more optimistic also tended to report more growth.

2.4.5 Coping, Social Support, and Religion

Problem-focused coping, as well as acceptance, positive reinterpretation, and positive religious coping were positively associated with growth (see Table 2.2).

Emotion-focused coping, including emotional social support, was also positively associated with growth. Social support generally tended not to be associated with growth, but social support satisfaction was positively associated with growth. A potential confounding of this relationship may be found in McMillen et al. (1997): perceived enhanced closeness was associated with friendship satisfaction three years later. When improved interpersonal relationships are being assessed as a potential growth outcome, this is likely to be confounded with assessment of social support variables, especially satisfaction. Hence the causal nature of the relationship is unclear: appropriate social support may promote adversarial growth, or adversarial growth (at least within the domain of interpersonal relationships) may be an artefact of perceived positive social support. Religious activities and intrinsic religiousness were both positively associated with growth.

2.4.6 Cognitive Processing, Affect, Quality of Life, and Psychological Distress

Rumination, intrusions and avoidance were all positively associated with growth (see Table 2.2). This is indicative of the cognitive processing necessary for the rebuilding of shattered worldviews following trauma (e.g., Calhoun & Tedeschi, 1998; Janoff-Bulman, 1992). Positive affect was consistently positively associated with adversarial growth, whereas negative affect was consistently negatively associated. However, the association between negative affect and adversarial growth was rendered non-significant in a partial correlation controlling for neuroticism (Evers et al., 2001). This study suggests that negative affect is only

associated with adversarial growth to the extent that it is a proxy for neuroticism. Quality of life was not associated with adversarial growth.

Depression was generally not associated with adversarial growth, but the significant relations that have been reported were all negative: people who were depressed were less likely to report growth (see Table 2.2). Anxiety was generally not associated with adversarial growth (but significant reported associations were negative), nor were pre-incident mental health diagnoses or prior trauma. PTSD diagnoses were negatively associated with positive life changes two weeks following sexual assault, but not one year later. In contrast, PTSD diagnoses were positively associated with stress-related growth in residents of Oklahoma City following the 1995 bombing (Pargament et al., 1998). Adolescents who used more alcohol, tobacco and marijuana were less likely to report posttraumatic growth (Milam et al., 2004).

2.5 Longitudinal Prediction of Adversarial Growth

Two studies provided details of variables associated longitudinally with adversarial growth (Abraido-Lanza et al., 1998; King et al., 2000). Of the variables considered, only positive affect, negative affect and self-efficacy were significantly associated with adversarial growth longitudinally over three years. Non-significant associations were reported for pain experienced, level of disability, age, length of time living with the illness, self-esteem, acculturation, acceptance, and emotional support (Abraido-Lanza et al., 1998). King et al.

(2000) reported non-significant associations with growth for optimism, self-esteem, life satisfaction, sense of coherence, and ego development over two years. These longitudinal associations do not allow a consideration of how these predictor variables might be associated with each other, nor how they may operate together to predict adversarial growth over time. Four multivariate longitudinal studies (Abraido-Lanza et al., 1998; Davis et al., 1998; McMillen et al., 1997; Park et al., 1996) were identified in the review that provided information about the longitudinal prediction of adversarial growth.

Park et al. (1996) examined potential predictors of stress-related growth in college students. Multiple regression analyses revealed six significant individual predictors of stress-related growth at six-month follow-up: positive reinterpretation; intervening positive life events; acceptance coping; intrinsic religiousness; initial stressfulness of the event and social support satisfaction. Positive affect was non-significant in this model. In a path analysis, social support and acceptance of one's illness did not predict thriving over three years in women suffering from chronic illness, but positive affect did so directly (Abraido-Lanza et al., 1998). By contrast, perceiving benefit at first assessment was associated with increases in positive mood within one year, with neuroticism controlled.

Optimism predicted benefit finding among bereaved persons (Davis et al., 1998), but not among parents of a disabled child (King et al., 2000). In these parents of a disabled child, accommodation (characterized by a concerted effort to deal with the situation) predicted stress-related growth, as did the accommodation-closure

interaction (characterized by high closure - acceptance and moving on – together with high accommodation, King et al., 2000). In contrast, Park et al. (1996) reported that event resolution did not predict stress-related growth. Respondents who thought they were going to die and who had pre-incident mental disorders were more likely to perceive benefit three years after a tornado, a mass shooting, and a plane crash (McMillen et al., 1997).

Given the inconsistent nature of these findings, and the dearth of studies providing longitudinal prediction of adversarial growth, few conclusions can be drawn. Taking the correlational and longitudinal evidence together, we conclude that greater traumatic experience, dealt with by means of positive reinterpretation and acceptance coping, in people who are optimistic, intrinsically religious and experience more positive affect, is likely to lead to reports of greater adversarial growth.

2.6 Temporal Course of Adversarial Growth

Several studies have found that the longer the time since the critical event, the greater the extent of adversarial growth that is reported (Cordova et al., 2001; Evers et al., 2001; Park et al., 1996, Study 3 Time 2; Polatinsky & Esprey, 2000). However, other studies have not found this to be the case (Fromm et al., 1996; Milam et al., 2004; Park et al., 1996, Studies 1 and 2, Study 3 Time 1).

It is unlikely that the passage of time per se influences adversarial growth, but rather intervening events and processes. Three longitudinal studies provided some insights into the temporal course of adversarial growth. Two weeks post-trauma, sexual assault survivors reported increased empathy and improved relationships. Positive changes in self and spirituality were generally established by two months following the event. The period between two weeks and two months accounted for most changes in growth, with reported levels remaining fairly consistent through one year (Frazier et al., 2001). Overall reported benefits were stable over extended periods of three years (McMillen et al., 1997) and eight years (Affleck et al., 1987). Significant increases over time were reported for positive changes in life philosophy, priorities, and spirituality (Affleck et al., 1987; McMillen et al., 1997). Closeness in relationships tended to decline over time, especially as these relationships became more distal, i.e., community relationships compared to family relationships (McMillen et al., 1997).

Adversarial growth, when measured longitudinally, is relatively stable over time. This longitudinal evidence is inconsistent with much of the cross-sectional evidence reviewed above, and may reflect self-serving biases in temporal comparison (McFarland & Alvaro, 2000). Longitudinal evidence should be afforded greater weight than cross-sectional evidence when examining the temporal course of adversarial growth, and further research is required before the temporal course of adversarial growth may be understood with confidence.

2.7 Predicting Adjustment from Adversarial Growth

Growth and distress might be considered as bipolar, consisting of a single dimension with opposite endpoints. If so, they must be consistently negatively associated. However, growth and distress may also be viewed as two separate, independent dimensions of experience that may have a range of associations. High scores on one dimension do not necessarily imply low scores on the other dimension.

Frazier et al. (2001) found that sexual assault survivors demonstrated negative changes in beliefs about the goodness of other people and the safety and fairness of the world in parallel with positive changes in philosophy of life and sense of personal strength. Positive changes in areas of self and spirituality were associated with less distress, whereas negative changes in these areas were associated with more distress, as were negative changes in relationships. Changes in beliefs were not associated with distress. Survivors who reported growth at two weeks posttrauma but not at 12 months posttrauma were as distressed as survivors who did not report growth at either time point, while survivors who reported growth at both time points were the least distressed of all participants.

A similar pattern of associations between benefit finding and distress was found in bereaved persons (Davis et al., 1998). For participants who found benefit between 6 and 13 months postloss, the mean distress level declined to a level comparable to those participants who had reported benefit at both time points. In contrast,

those who lost benefits between 6 and 13 months postloss changed from a low level of distress at 6 months (when they reported benefit) to a relatively high level of distress at 13 months (when they had lost this benefit).

Perceived benefits at seven weeks following a heart attack significantly predicted heart attack recurrence and general health morbidity at an eight-year follow up: patients who perceived benefits were less likely to have suffered a subsequent attack and were more likely to have better general health (Affleck et al., 1987). Joseph et al. (1993) found no association between reports of positive and negative changes in outlook in survivors of a shipping disaster, while significant positive associations between positive and negative changes have been reported following combat exposure (Fontana & Rosenheck, 1998) and bone marrow transplants (Fromm et al., 1996).

The evidence reviewed demonstrates a range of associations between growth and distress, and hence suggests these constructs are not ends of a continuum. With regard to clinical applications, the evidence indicates that while the alleviation of distress does not necessarily promote growth, the experience of growth does act to promote postevent adjustment and to alleviate distress (Davis et al., 1998; Frazier et al., 2001). Hence the facilitation of growth in survivors may be considered as a clinical intervention that is different from interventions designed to alleviate distress. However, through facilitating growth, distress may be alleviated, which suggests a new mechanism of potential therapeutic change in trauma survivors.

However, on the basis of this early evidence, it remains too early to make prescriptive recommendations.

2.8 Methodological Considerations

From a research perspective, the need for greater methodological rigor and the use of well-validated measures is evident. A review of controlled disaster studies noted that as the methodological rigor of empirical research increased, the probability of establishing high effect sizes decreased (Rubonis & Bickman, 1991). As the quality of adversarial growth research increases, a different picture may emerge from that presented on the basis of the evidence reviewed here.

Particular attention to several design issues is merited. First, over-reliance on self-report measures that do not allow for negative responses should be avoided. The Changes in Outlook Questionnaire (Joseph et al., 1993) and the Revised Stress-Related Growth Scale (Armeli et al., 2001) both allow for the measurement of positive and negative changes. Second, the issues of prospective longitudinal pre-post designs and appropriate control groups in traumatic stress research (Norris, 1996) are also found in adversarial growth research. The lack of pre-event data makes it difficult for self-reported changes to be verified, but third party reports have reliably validated adversarial growth (Park et al., 1996; Weiss, 2002). Third, the lack of objective indicators of adversarial growth suggests a need for collateral assessment of related behavioural and physiological indicators. Bloom (1998) reported social and political antecedents of adversarial growth, and Epel et al.

(1998) linked posttraumatic growth reports with more adaptive hormonal stress responses. Researchers should consider how behavioural and physiological indicators may be built into their research to validate self-reported changes. Fourth, the overlap between "positive reinterpretation" coping and adversarial growth calls into question the distinction between these constructs. Is adversarial growth simply a way of coping or does it represent an objective outcome? Are closer relationships indicative of effective social support or an objective outcome of adversarial growth? These are difficult questions to untangle, although using multitrait-multimethod assessment procedures (Campbell & Fiske, 1959) may allow them to be teased apart. Fifth, to what extent is adversarial growth simply the adherence to some cultural script? That is to say, do people report growth simply because they have been led to believe that good things do come from traumatic events? Taking as a whole the evidence reviewed, we consider this unlikely. As difficult as it may be from an empirical perspective to demonstrate adversarial growth experimentally, the expanding body of research evidence endorses its validity.

From an applied perspective, it is important to emphasize that the studies reviewed here are nomothetic. While they allow cautious generalizations to be made across populations, the findings do not necessarily correspond to any given individual's experience of adversarial growth. Group results may mask significant individual differences, and the idiographic level of analysis may be more appropriate when considering the needs and experiences of a presenting client (e.g., Frazier et al., 2001; Saakvitne, Tennen, & Affleck, 1998).

2.9 Conclusions

This review identifies concordant and discordant findings in the adversarial growth literature. We recommend four research priorities. First, the associations between growth and distress, especially longitudinally, have not been comprehensively addressed. Second, the process of adversarial growth over time, both developmentally and longitudinally, requires attention. We did not identify a single study that considered adversarial growth in children, for example. Although necessarily resource-intensive, it is only through multivariate longitudinal research that the predictors and process of adversarial growth may be more reliably understood. Third, associations between psychosocial variables and adversarial growth are typically small. It is unlikely that adversarial growth will be substantially explained by one or even several factors. Researchers should endeavor to identify new variables that contribute to adversarial growth. Fourth, comprehensive theoretical models are needed that account more fully for the range of mediating and moderating variables involved (e.g., Calhoun & Tedeschi, 1998). The most important research questions, in our view, centre on the potential clinical applications of adversarial growth research. As longitudinal relations between adversarial growth, distress and adjustment are reliably measured and understood, we can begin to identify points of potential therapeutic leverage in work with survivors of trauma and other adversity. These are some of the issues to which we turn in the following chapters of this thesis.

Chapter 3: The Role of Emotions in Adversarial Growth: Emotional Experience, Emotion-Focused Coping, and Emotional Intelligence

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3.1 Introduction

As has been shown in Chapter 2, positive changes in people following exposure to and experience of various traumas, adversities, stresses, and life events have been documented in a wide range of populations (adolescents and adults, across nationalities), using a variety of methodologies (self-report, questionnaires, open-ended questions, interviews), and following a wide range of events (e.g., bereavement, cancer, childhood sexual abuse, disaster, earthquakes, medical illness, military combat, rape and sexual assault, transportation accidents) (see Linley & Joseph, 2004b; Tedeschi & Calhoun, 2004b, for reviews).

Similarly, the range of variables studied in relation to adversarial growth has been wide, and includes event factors, sociodemographic factors, personality factors, and psychosocial factors (see Chapter 2; Linley & Joseph, 2004b). However, research to date has typically not considered some of the interactions and processes that are central to models of adversarial growth (Calhoun & Tedeschi, 1998; Schaefer & Moos, 1992, 1998), and that were identified as a key recommendation for future research in the area (Linley & Joseph, 2004b). As such, there is a need for multivariate analyses that allow for tests of mediation:

"Research examining mediational models of the mechanisms by which personal and environmental resources are associated with positive change is virtually nonexistent" (Frazier, Tashiro, Berman, Steger, & Long, 2004, p. 21).

3.1.1 Models of Adversarial Growth

The most influential models of adversarial growth proposed to date are the conceptual model of Schaefer and Moos (1992, 1998) and the functional-descriptive model of Calhoun and Tedeschi (1998). Schaefer and Moos (1992, 1998) describe how environmental and personal system factors shape life crises and their aftermath, and subsequently influence appraisal and coping processes. In turn, these appraisal and coping processes may contribute to the development of positive outcomes or personal growth. Central to this model is the assumption that coping functions as one mechanism through which personal and social resources can be used to achieve subsequent growth and positive change.

The functional-descriptive model (Calhoun & Tedeschi, 1998) discusses how traumatic events serve as seismic challenges to the pretrauma schema, by shattering prior goals, beliefs, and ways of managing emotional distress. When these schemas are shattered in this way, this shattering leads to ruminative activity, as people try to make sense of what has happened and to deal with their emotional reactions to the trauma. This ruminative process is influenced by social support networks, which provide sources of comfort and relief, and the coping behaviours that people employ to allow them to manage their emotional distress,

and work towards the construction of new, posttrauma schemas. Importantly, although this shift toward more effortful ruminative activity represents growthful adaptation, it does not exclude the possibility of some enduring distress from the trauma, but at a lower level than was experienced in the immediate aftermath.

From these theoretical models, one can derive that the experience of a stressful or traumatic adverse event propels the person through a series of responses, which may be more or less adaptive. First, they appraise the event for its significance and implications, including any threat to themselves and their subjective emotional experience, which may include elements of fear, horror, and helplessness (see DSM-IV Criterion A for posttraumatic stress disorder, American Psychiatric Association, 1994). This is likely to lead to emotional distress, which is then managed (or not) through the use of coping and social support strategies. When the coping and social support strategies are adaptive (although it is not specified what would necessarily constitute adaptive and maladaptive strategies), the person may experience growth and positive change as they successfully adapt to and integrate the adverse experience.

3.1.2 Coping, Social Support, and Emotions

It is clear from each of these models that the roles of coping, social support, and emotions are considered central to the process of positive change and adversarial growth. However, only two studies to date have explored the processes of how coping and social support may influence adversarial growth. Park et al. (1996)

used a six month follow-up to explore the roles of personality, social support, event characteristics, coping, and life events in predicting stress-related growth. They found that social support satisfaction, and positive reinterpretation and acceptance coping, all significantly predicted stress-related growth. Armeli et al. (2001) used a cluster analytic approach to identify event appraisal and coping profiles that were associated with stress-related growth. They found that stress-related growth was highest for people who reported highly stressful events, but who had adequate coping and support resources to deal with these events.

The literature review conducted in Chapter 2 did not identify any studies that showed significant associations between social support and growth, with the exception of Koenig et al. (1998) and Park et al. (1996). However, a number of studies were identified that addressed the associations between coping and adversarial growth. Maercker and Langner (2001) found associations between adversarial growth and emotion-focused coping. Both positive and negative religious coping were found to have significant associations with stress-related growth across three studies (Koenig et al., 1998; Pargament et al., 2000; Pargament et al., 1998). Problem-focused coping was found to be associated with growth in four studies (Armeli et al., 2001; Evers et al., 2000; Koenig et al., 1998; Maercker & Langner, 2001). Emotional social support coping, positive reinterpretation coping, acceptance coping, and religious coping were found to be associated with stress-related growth (Park et al., 1996). More recently, Frazier et al. (2004) have shown approach coping to be positively associated with positive

life change, and avoidant coping to be negatively associated with positive life change.

There is also an increasing re-evaluation of the role of emotion in coping with stress and trauma. Traditionally, distinctions between problem-focused and emotion-focused coping were taken to suggest that the former was adaptive, the latter, maladaptive (Stanton, Danoff-Burg, Cameron, & Ellis, 1994; Stanton, Kirk, Cameron, & Danoff-Burg, 2000). However, more recent functionalist approaches have suggested a different view, concerning the fundamentally adaptive nature of emotion and emotional expression (Levenson, 1994). As such, attention has shifted to examine the processes through which emotion-focused coping may be adaptive (Stanton & Franz, 1999).

Taking the theoretical models and the empirical literature together, there is a need to understand more specifically the roles that emotions, coping and social support may play in the experience of adversarial growth. As Linley and Joseph (2004b; Chapter 2) noted, it is most likely the case that there is not any single variable that will explain a large proportion of the variance in adversarial growth, but rather multivariate approaches are needed, together with a consideration of new variables that may contribute to our understanding of adversarial growth. In these studies, we sought to explore the multivariate relationships between coping, social support, and emotions, and their associations with adversarial growth. We focused our attention on subjective emotional experiences, emotion-focused coping

(specifically venting and seeking emotional social support), received and perceived social support, and emotional intelligence.

3.1.3 Overview of Studies

Study 1 examines the role that subjective emotional experience and coping may play in adversarial growth. We hypothesised that, since there appears to be a curvilinear relationship between traumatic exposure and growth, with reported levels of growth highest at median levels of exposure (Fontana & Rosenheck, 1998; Schnurr et al., 1993), adaptive coping responses may mediate the relationship between the subjective emotional experience of the event and emotional distress, and adversarial growth. At low levels of exposure, there is insufficient adversity for coping strategies to be used, and at high levels of exposure, coping strategies may be overwhelmed. Specifically, given that Calhoun & Tedeschi's (1998) model specifies that coping is used to manage the effects of emotional distress, we hypothesised that emotion-focused coping may be most pertinent in this relationship. Hence, we hypothesised that emotion-focused coping would mediate the effect of the subjective emotional experience of the event (e.g., feelings of fear, horror, and helplessness), and the effect of emotional distress and upset at the time of the event, on growth following the event.

Study 2 adopts a more multivariate approach, and includes examination of the roles of emotion-focused coping (i.e., venting and using emotional support),

received social support, social support satisfaction and emotional intelligence in adversarial growth. Emotional intelligence is a relative newcomer to the field of psychosocial inquiry, first appearing in the academic literature in the early 1990's (Salovey & Mayer, 1990). While grossly extravagant claims have been made for its role in various domains of success in life, there is now an accumulating body of evidence that is beginning to testify to its value (Salovey, Caruso, & Mayer, 2004). Emotional intelligence refers to "the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflexively regulate emotions so as to promote emotional and intellectual growth" (Mayer & Salovey, 1997, p. 5). Some work has also suggested that emotional intelligence may counteract negative aversive ruminations following distressing events (Palmer, Donaldson, & Stough, 2002). However, to our knowledge, no research has to date investigated the role of emotional intelligence in adversarial growth. Given this theoretical rationale and early empirical evidence, we sought to explore whether emotional intelligence would be a stronger predictor of adversarial growth than the other psychosocial variables we considered, namely, emotion-focused coping (venting and using emotional support), received social support, and social support satisfaction.

3.2 Study 1

3.2.1 Method

3.2.1.1 Participants

Participants were 148 college students (121 women, 25 men, 2 missing data) from a major university in the Midlands of England. Their mean age was 20.23 years (*SD* = 4.16 years), and they were primarily single (91%) and of white ethnic heritage (86%). Participants indicated that they had experienced a mean of 3.30 events (*SD* = 2.19 events) from a 13-item checklist of traumatic events, and that these events had occurred, on average, 4.49 years (*SD* = 4.34 years) previously. These events were predominantly unexpected bereavement (28%), other very upsetting events which the participants described in their own words (16%), events similar to those described but which the participant did not wish to disclose (12%), witnessing others as they experienced one of the events described on the checklist (12%), unwanted sexual experiences (11%), being involved in a serious accident (4%), or being in danger of serious injury or death (4%).

3.2.1.2 Measures (see Appendix 3.1)

Adverse and Traumatic Events Questionnaire. We developed a measure of adverse and traumatic events based on Vrana and Lauterbach (1994). This assessed people's exposure (using a dichotomous yes-no format) to serious

accidents, large fires or explosions, natural disasters, violent crime, unwanted sexual experiences, military combat, unexpected or emergency medical interventions, being in danger of serious injury or death, witnessing others as they experienced any of these events, diagnosis of a serious or terminal illness, unexpected bereavement, other similar experiences that they did not wish to describe, and other very traumatic events not otherwise listed. Participants also indicated which event they found most upsetting (if they indicated more than one event), together with when the event happened. Further, using a 0 ("*not at all*") to 6 ("*severely / extremely*") scale, participants indicated the extent to which they or someone else was physically injured, the extent to which they felt that their or someone else's life was in danger, and their subjective emotional experience of fear, horror, and helplessness. The three subjective emotional experience items were collapsed into a single variable (internal consistency reliability = .71). Participants also indicated how much they were upset by the event at the time it happened, and how much they were upset by the event at the present time.

COPE (Carver, Scheier, & Weintraub, 1989). A 60-item self-report measure of coping strategies, scored using a four-point Likert-type scale (1 = *Not at all*; 4 = *A lot*), to indicate the frequency of use of specific coping strategies in relation to the specified event (*state* version). The COPE includes 15 four-item subscales that assess each of active coping, planning, suppression of competing activities, restraint coping, seeking social support for instrumental reasons, seeking social support for emotional reasons, positive reinterpretation and growth, acceptance, turning to religion, venting of emotions, denial, behavioural disengagement,

mental disengagement, alcohol and drug use, and humor. The COPE is one of the most widely used measures in coping research, and has good psychometric properties. Internal consistency reliabilities for the present sample ranged from .55 to .98; for venting and seeking emotional social support, they were .88 and .89 respectively. Higher scores indicate a greater use of that coping strategy.

Posttraumatic Growth Inventory (PTGI: Tedeschi, & Calhoun, 1996). A 21-item self-report measure of positive outcomes following "*the event you described above*", scored using a six-point Likert format scale (0 = "*I did not experience this change*"; 5 = "*I experienced this change to a very great degree*"). Sample items include "*I discovered that I'm stronger than I thought I was*", "*A sense of closeness with others*", and "*Appreciating each day*". The inventory yields a potential range of 0 – 105, with a higher score indicating greater experience of posttraumatic growth. Acceptable test-retest reliability over two months has been reported (r = .71, Tedeschi, & Calhoun, 1996). Internal consistency reliability for the present sample was .92.

Changes in Outlook Questionnaire (CiOQ: Joseph et al., 1993). A 26-item self-report measure of changes in outlook, scored using a six-point Likert format scale (1 = *Strongly disagree*; 6 = *Strongly agree*). The CiOQ has two sub-scales: Positive changes (11 items; e.g., "*I feel more experienced about life now*", "*I value other people more now*"), with a range of 11 - 66; and Negative changes (15 items; e.g., "*I no longer feel able to cope with things*", "*I have very little trust in myself now*"), with a range of 15 – 90. Internal consistency reliabilities for the

positive and negative scales were .88 and .87 respectively. Higher scores indicate more positive and negative changes respectively.

3.2.1.3 Procedure

Participants were invited to complete a survey that was examining how personality was associated with the experience of different life events. Questionnaires were distributed to students during undergraduate lectures. Participants were informed that they were not obliged to complete the study, could withdraw at any time and could ignore any questions they did not wish to answer.

The questionnaire packs were presented in four different orderings to control for possible order effects and response bias. However, the event questionnaire was always presented first, since other responses were keyed back to this. Over 96% of the questionnaires distributed were returned appropriately completed.

3.2.1.4 Data Analyses

Correlation analyses were used to test for associations between variables. Regression analyses were additionally used to test hypothesised mediational models. We tested two mediational models. First, that emotion-focused coping (i.e., venting, and seeking emotional social support) mediated the relationship between the subjective emotional experience of fear, horror, and helplessness

(collapsed into a single variable) and adversarial growth. Second, that emotion-focused coping mediated the relationship between emotional distress at the time of the event and adversarial growth. For all of these analyses, posttraumatic growth and positive and negative changes were treated as outcome or dependent variables, and adversarial growth was assessed using both of posttraumatic growth and positive changes.

3.2.2 Results

Correlations between posttraumatic growth, positive changes, and negative changes, and event factors (see Table 3.1) and coping variables (see Table 3.2) are presented below. The time since the event was not associated with any of the outcome variables. Positive changes were significantly associated with perceived threat to others, the subjective emotional experience of the event, emotional distress (upset) at the time of the event and emotional distress (upset) at the current time. Negative changes were significantly associated with the subjective emotional experience of the event and emotional distress (upset) at the current time.

There were significant associations between many of the coping variables and posttraumatic growth and positive changes (see Table 3.2). The strongest of these correlations was with the positive reinterpretation and growth subscale, consistent with Park et al. (1996), but in contrast, acceptance coping was not associated with growth or positive change. Posttraumatic growth was associated with positive

changes (r = .75, p<.001) but not with negative changes (r = .06, *ns*). Positive and negative changes were not associated (r = .10, *ns*).

Table 3.1. Correlations of Event Factors with Posttraumatic Growth, Positive Changes and Negative Changes (Study 1).

	Posttraumatic Growth	CiOQ Positive changes	CiOQ Negative changes
Time since event	.04	-.01	.08
Threat to self	-.04	-.03	.12
Threat to others	.06	.17*	-.12
Subjective emotional experience	.09	.20*	.18*
Upset at time of event	.15	.26**	.12
Upset at current time	.00	.19*	.25**

Note. CiOQ = Changes in Outlook Questionnaire; *p<.05, **p<.01, N = 118-143.

Table 3.2. Correlations of Coping Variables with Posttraumatic Growth, Positive Changes and Negative Changes (Study 1).

	Posttraumatic Growth	CiOQ Positive changes	CiOQ Negative changes
Active Coping	.42***	.35***	.17
Planning	.42***	.33***	.26**
Suppression of Competing Activities	.42***	.31***	.31***
Restraint Coping	.31***	.26**	.15
Seeking Instrumental Social Support	.40***	.26**	-.04
Seeking Emotional Social Support	.43***	.26**	-.09
Positive Reinterpretation and Growth	.54***	.35***	-.01
Acceptance	.08	-.04	-.13
Religion	.29***	.12	-.04
Venting	.38***	.28***	.07
Denial	.20*	.16	.39***
Behavioural Disengagement	.24**	.23**	.45***
Mental Disengagement	.28***	.19*	.30***
Alcohol and Drug Use	.06	.07	.44***
Humor	.01	-.01	.02

Note. CiOQ = Changes in Outlook Questionnaire; *p<.05, **p<.01, ***p<.001, N = 133-143.

We hypothesised that emotion-focused coping (i.e., seeking emotional social support, and venting) would mediate the effect of subjective emotional experience of the event and emotional distress on adversarial growth. Kenny, Kashy, and Bolger (1998) described four steps to determine whether mediation occurs. Step 1 is to show a significant correlation between predictor and outcome (here, between subjective emotional experience and emotional distress at the time of the event, and positive changes). Table 3.1 shows the significant correlations between both subjective emotional experience and emotional distress at the time of the event, and positive changes. Step 2 is to show a significant correlation between predictor and mediator (here, between subjective emotional experience and emotional distress at the time of the event, and seeking emotional social support and venting). Subjective emotional experience was significantly correlated with venting (r = .24, p<.01), but not with seeking emotional social support (r = .05, *ns*). Emotional distress at the time of the event was significantly correlated with seeking emotional social support (r = .17, p<.05) and venting (r = .35, p<.001).

Steps 3 and 4 are accomplished with one regression analysis, with the outcome as the dependent variable (here, positive changes), and with the predictor and mediator entered simultaneously (here, subjective emotional experience and venting, respectively; emotional distress at the time of the event and seeking emotional social support, respectively; emotional distress at the time of the event and venting, respectively). Step 3 is that the mediator affects the outcome when the predictor is controlled for. Consistent with Step 3, venting was associated with positive changes when we controlled for subjective emotional experience (β = .24,

t (134) = 2.81, p<.01), and when we controlled for emotional distress at the time of the event (β = .21, t (134) = 2.34, p<.05). Again consistent with Step 3, seeking emotional social support was associated with positive changes when we controlled for emotional distress at the time of the event (β = .22, t (135) = 2.73, p<.01). Step 4 determines whether partial or complete mediation has occurred. Complete mediation is indicated when the effect of the predictor (subjective emotional experience and emotional distress at the time of the event) on the outcome (positive changes) is completely removed when the mediator (venting and seeking emotional social support) is controlled. If Steps 1-3 are satisfied but Step 4 is not, partial mediation is said to have occurred.

The data indicate that venting completely mediated the effect of subjective emotional experience on positive changes (β = .15, t (134) = 1.73, *ns*), but partially mediated the effect of emotional distress at the time of the event on positive changes (β = .19, t (134) = 2.18, p<.05). Seeking emotional social support also partially mediated the effect of emotional distress at the time of the event on positive changes (β = .22, t (135) = 2.71, p<.01). In order to test if this mediational model provided the most viable interpretation of the data, we tested alternative models that posited subjective emotional experience and emotional distress as mediators of venting and seeking emotional social support on positive changes. However, these models failed to meet the criteria for mediation. These findings provide support for our hypothesis, in that venting and seeking emotional social support both play a mediational role on the effect of event appraisals (subjective emotional experience and emotional distress) on positive changes.

3.2.3 Discussion

These findings support our hypothesis that emotion-focused coping strategies play a mediational role in the relationship between emotional distress following adverse events and positive changes. It seems reasonable to suggest, on the basis of these data, that how people manage their emotional distress following adversity plays a key role in determining their experience of growth and positive change. These findings are consistent with the theoretical models proposed by Schaefer and Moos (1992, 1998) and Calhoun and Tedeschi (1998), who have argued that coping plays a key process role in the experience of growth following trauma and adversity.

3.3 Study 2

3.3.1 Method

3.3.1.1 Participants

Participants were 190 college students (106 women, 84 men) from a major university in the Midlands of England. Their mean age was 21.94 years (*SD* = 4.23 years), and they were predominantly single (87%) and of white (86%) or Indian (6%) ethnic heritage. Participants indicated that they had experienced a mean of 2.11 events (*SD* = 1.16 events) from a 13-item checklist of traumatic

events. These events had occurred on average 5.10 years previously (SD = 5.31 years), and were predominantly unexpected bereavement (31%), witnessing others (18%), and other very traumatic events (14%).

3.3.1.2 Measures (see Appendix 3.2)

Adverse and Traumatic Events Questionnaire. As Study 1, except that only the event checklist, and not the subjective emotional experience questions, were included (in order to reduce the response burden on participants).

Brief COPE (BC: Carver, 1997). Fourteen 2-item subscales assess each of active coping, planning, positive reframing, acceptance, humor, religion, using emotional support ("*I got comfort and understanding from someone*"), using instrumental support, self-distraction, denial, venting (e.g., "*I expressed my negative feelings*"), substance use, behavioural disengagement, and self-blame. The Brief COPE was developed from the COPE Inventory (Carver et al., 1989), and has been shown to have good internal consistency reliability, especially given that the subscales are each only two items (Carver, 1997). Internal consistency reliabilities for this sample ranged from .50 to .96 ; for the venting and seeking emotional support subscales, they were .58 and .92 respectively. The items were scored on a four-point scale (1 = "*I didn't do this at all*"; 4 = "*I did this a lot*"), in relation to "*the event you described above*". Higher scores indicate a greater use of that coping strategy.

Crisis Support Scale (CSS: Joseph, Andrews, Williams, & Yule, 1992). A seven item measure of social support that taps both practical ("*Are people helpful in a practical sort of way*?") and emotional ("*Are you able to talk about your thoughts and feelings*?") support, and social support satisfaction ("*Overall, are you satisfied with the support you receive*?"). One item is reverse-scored, and the satisfaction item is scored separately. Participants were asked about the "*support that you received in relation to the event you described above*." Higher scores indicate greater levels of social support and social support satisfaction, respectively. A recent review endorsed the psychometric properties of the scale (Elklit, Pedersen, & Jind, 2001). The internal consistency reliability for this sample was .75.

Emotional Intelligence Scale (EIS: Schutte et al., 1998). The EIS is based on the Salovey and Mayer (1990) model of emotional intelligence. It has been shown to have good internal consistency and test-retest reliability, as well as good convergent and discriminant validity (Schutte et al., 1998). The EIS consists of 33 items, scored using a five-point scale (1 = *Strongly disagree*; 5 = *Strongly agree*). Sample items include "*I am aware of my emotions as I experience them*" and "*I know what other people are feeling just by looking at them*." Three items are reverse-scored, such that a higher score indicates greater emotional intelligence, with a potential range of 33-165. The internal consistency reliability for this sample was .87.

Posttraumatic Growth Inventory – Short Form (PTGI – S: Calhoun & Tedeschi, 1999). The PTGI Short form was developed by Calhoun and Tedeschi (1999) from the original PTGI (Tedeschi & Calhoun, 1996). While Calhoun and Tedeschi do not report psychometric properties for the scale, subsequent work has shown that the scale has good internal consistent reliability and convergent and discriminant validity (Linley, Joseph, & Andrews, 2004). Scoring is the same as for the full PTGI (see above), but with a potential range of 0-65, with higher scores indicating a greater experience of posttraumatic growth. The internal consistency reliability for this sample was .88. The short form was selected for this study in order to reduce the response burden on participants.

Changes in Outlook Questionnaire (CiOQ: Joseph et al., 1993). As Study 1 above. The internal consistency reliabilities for this sample were .85 for the positive change subscale and .86 for the negative change subscale.

3.3.1.3 Procedure

Participants were invited to complete a survey that was examining how personality was associated with the experience of different life events. Questionnaires were distributed to students during undergraduate lectures. Participants were informed that they were not obliged to complete the study, could withdraw at any time and could ignore any questions they did not wish to answer.

The questionnaire packs were presented in four different orderings to control for possible order effects and response bias. However, the event questionnaire was always presented first, since other responses were keyed back to this. Over 98% of the questionnaires distributed were returned appropriately completed.

3.3.1.4 Data Analyses

Correlation analyses were used to test for associations between variables. Four multiple regression analyses, with simultaneous entry of the predictor variables, were additionally used to test whether emotional intelligence or each of venting, using emotional support, received social support, or social support satisfaction, was the stronger predictor of adversarial growth. For these analyses, posttraumatic growth and positive and negative changes were considered as outcome or dependent variables, and coping, social support, and emotional intelligence, were treated as independent or predictor variables.

3.3.2 Results

3.3.2.1 Correlations between Variables

There were significant associations between many of the coping variables and posttraumatic growth and positive changes (see Table 3.3). The strongest of these correlations were with the planning, using instrumental support, and positive reframing subscales. However, acceptance coping was not associated with growth

or positive change, but was negatively associated with negative changes. Both received social support and social support satisfaction were not associated with posttraumatic growth and positive changes, although both were negatively associated with negative changes (see Table 3.3). Emotional intelligence was associated with positive changes, and negatively associated with negative changes. Although the correlation between posttraumatic growth and emotional intelligence was positive and in the hypothesised direction, it did not reach statistical significance (see Table 3.3). Posttraumatic growth was associated with positive changes (r = .53, p<.001) and marginally associated with negative changes (r = .16, p<.05). Positive and negative changes were not associated (r = .05, *ns*). The time since the event was not associated with any of the outcome variables.

Table 3.3. Correlations of Coping Variables, Social Support, and Emotional Intelligence with Posttraumatic Growth, and Positive and Negative Changes (Study 2).

	Posttraumatic Growth	CiOQ Positive Changes	CiOQ Negative Changes
Active Coping	.23**	.14	-.10
Planning	.37***	.34***	-.05
Positive Reframing	.32***	.24***	-.06
Acceptance	.15	.11	-.22**
Humor	.02	-.10	.05
Religion	.23**	.10	.03
Using Emotional Support	.29***	.19*	-.18*
Using Instrumental Support	.35***	.16*	-.14
Self-Distraction	.21**	.21**	.14

Denial	.25***	.27***	.25***
Venting	.29***	.18*	-.05
Substance Use	.24***	.11	.39***
Behavioural Disengagement	.16*	.13	.34***
Self-Blame	.28***	.20**	.28***
CSS Social Support	.03	.08	-.24***
CSS Social Support Satisfaction	-.02	-.02	-.31***
Emotional Intelligence	.15	.30***	-.36***

Note. CSS = Crisis Support Scale; CiOQ = Changes in Outlook Questionnaire; *p<.05, **p<.01; ***p<.001; N = 172-178.

3.3.2.2 Multiple Regression of Emotional Intelligence and other Psychosocial Variables on Adversarial Growth

Given the absence of previous research that has explored associations between emotional intelligence and adversarial growth, we examined whether emotional intelligence or each of venting, using emotional support, received social support, or social support satisfaction were the stronger predictors of adversarial growth. To this end, we computed separate multiple regression analyses, each time regressing emotional intelligence and one of the other variables on adversarial growth. Because the association between emotional intelligence and posttraumatic growth was non-significant, we focused our analyses here on the CiOQ positive changes measure of adversarial growth.

In each case, emotional intelligence was found to be a significant predictor of positive changes, and each of the other four variables considered was not (see Table 3.4). This is not surprising with regard to received social support and social support satisfaction, which were not found to correlate with positive changes (see Table 3.3). However, the finding that emotional intelligence was a stronger predictor of growth than either venting or using emotional support points to its potential role in adversarial growth, something which has not been addressed in the literature to date.

Table 3.4. Four Multiple Regression Analyses of Emotional Intelligence and Other Psychosocial Variables on Adversarial Growth

Variable	*R*	R^2	*B*	*SE (B)*	β	*t*
Venting	.32	.10	.62	.39	.12	1.58
Emotional Intelligence			.18	.05	.27	3.58***
Using Emotional Support	.32	.10	.56	.32	.13	1.73
Emotional Intelligence			.18	.05	.27	3.61***
Received Social Support	.28	.08	.01	.09	.01	.10
Emotional Intelligence			.17	.05	.28	3.57***
Social Support Satisfaction	.31	.09	-.48	.38	-.10	-1.26
Emotional Intelligence			.20	.05	.32	4.11***

Note. ***p<.001. All df = 165-167. Each variable was entered simultaneously with emotional intelligence to predict CiOQ positive changes.

3.3.2.3 Multiple Regression of Emotional Intelligence and other Psychosocial Variables on Negative Changes

Given the previous arguments we have made for the need to include a consideration of factors that influence both the positive and the negative aspects of human experience (Linley & Joseph, 2003), and also our desire to establish the extent to which positive and negative reactions following trauma may have bivariate, rather than bipolar differential associations with other variables (Chapter 2; Linley & Joseph, 2004b), we similarly computed separate multiple regression analyses with simultaneous entry for each psychosocial variable (venting, using emotional support, received social support, and social support satisfaction) with emotional intelligence to predict CiOQ negative changes.

These analyses showed that emotional intelligence was a stronger predictor of fewer negative changes than both venting and seeking emotional support: Higher emotional intelligence was associated with fewer negative changes. Emotional intelligence was also a stronger predictor of fewer negative changes than both received social support and social support satisfaction, although both of these variables remained significant, indicating that they shared only a small amount of variance with emotional intelligence (see Table 3.5).

Table 3.5. Four Multiple Regression Analyses of Emotional Intelligence and Other Psychosocial Variables on Negative Changes

Variable	*R*	R^2	*B*	*SE (B)*	β	*t*
Venting	.36	.13	.31	.47	.05	.67
Emotional Intelligence			-.29	.06	-.37	-4.98***
Using Emotional Support	.37	.14	-.54	.39	-.10	-1.41
Emotional Intelligence			-.26	.06	-.34	-4.56***
Received Social Support	.40	.16	-.22	.10	-.16	-2.11*
Emotional Intelligence			-.25	.06	-.32	-4.37***
Social Support Satisfaction	.43	.18	-1.48	.44	-.24	-3.35***
Emotional Intelligence			-.23	.06	-.30	-4.18***

Note. *p<.05; ***p<.001. All df = 167-169. Each variable was entered simultaneously with emotional intelligence to predict CiOQ negative changes.

3.3.3 Discussion

These findings suggest that emotional intelligence is a stronger predictor of both positive and negative changes following adversity than are other emotional coping (i.e., venting and using emotional support) and social support variables. As shown above, the role of emotions and how people manage their emotional distress following trauma and adversity is a core component of theoretical models of growth and positive change (Calhoun & Tedeschi, 1998; Schaefer & Moos, 1992, 1998).

As a relative newcomer to the psychosocial literature, emotional intelligence has not been investigated in relation to adversarial growth, to the best of our knowledge. However, other theoretical and empirical perspectives have suggested that emotional intelligence may be a central component of models of coping with stress, trauma and adversity (Salovey et al., 1999). These data, demonstrating that emotional intelligence is a stronger predictor of adversarial growth than other emotion variables, provide empirical support for these perspectives.

Other findings from this study also merit attention. The range of associations between a variety of coping strategies, posttraumatic growth, and positive and negative changes point to the complexity of the coping-growth relationship. It is unlikely that these associations can be best understood in linear terms, and rather mediational and moderational models are required, such as we used here, or other advanced analyses such as the cluster analytic methods used by Armeli et al. (2001).

The absence of any relationship between measures of growth and either received social support or social support satisfaction is consistent with previous research that has failed to establish such a relationship (Cordova et al., 2001; Evers et al., 2001; Joseph et al., 1993; Maercker & Langner, 2001; Park et al., 1996; Updegraff et al., 2002; see also Linley & Joseph, 2004b). In those instances where a positive relationship was established, this was with emotional social support (Koenig et al., 1998) and satisfaction with social support (Park et al., 1996). More recently, Frazier et al. (2004) have shown that social support was associated with positive life change following sexual assault. However, the measure of social support used confounded the helpfulness of people and the amount of support received, both measured using a single item each, which was then collapsed to provide an overall measure of social support. In terms of the present consideration, this confounding restricts the inferences that can be made.

3.4 General Discussion

The findings from these two studies help provide a clearer understanding of the role of emotions in positive change and growth following trauma and adversity. While emotions and how people manage them, particularly emotional distress, are central to theoretical models of growth following trauma and adversity (Calhoun & Tedeschi, 1998; Schaefer & Moos, 1992, 1998), there has been surprising little research that has examined the role that they may play in adversarial growth. Our findings suggest that emotion-focused coping mediates the associations between both negative subjective emotional experiences and emotional distress, and adversarial growth. Further, our findings suggest that emotional intelligence may be a stronger predictor of both

positive and negative changes following adversity than are other emotion-focused coping and social support variables. As such, emotional intelligence merits further research consideration in its associations with adversarial growth.

The absence of any reliable associations between social support and adversarial growth provides a theoretical quandary. It is well-established within the literature that social support buffers the negative effects of stress on mental health (Cohen & Wills, 1985), and hence one may anticipate that social support would be associated with greater adversarial growth. However, the empirical evidence, including that reported here, does not bear this out. Future research should focus on exploring this relationship more fully. We suggest it is important to recognize that growth and distress are not bipolar, being opposite ends of the same continuum, but rather are bivariate, having a range of possible associations (Chapter 2; Linley & Joseph, 2004b). This parallels findings from the emotions literature, that positive and negative affect, although often negatively associated, are not actually bipolar, and thus may be differentially associated under different circumstances (Cacioppo & Berntson, 1994). Hence, extrapolating to social support and adversarial growth, we cannot assume that because social support is a well-established buffer against the negative effects of trauma, that it will be *de facto* associated with greater adversarial growth. It may be that traumatic exposure and distress moderate the effect of social support on growth, with social support only being associated with growth at higher levels of traumatic exposure and greater emotional distress. Or it may be that particular types of social support (i.e., emotion-focused social support) are associated with growth, but other types (practical social support) are not. This hypothesis has intuitive appeal, in that the role of emotional processing in adversarial growth is well-established, and it would

appear logical that something that facilitated this (i.e., emotional social support) would be associated with increased growth. Indeed, this hypothesis appears to fit with findings from the three studies that have found a relationship to date (Frazier et al., 2004; Koenig et al., 1998; Park et al., 1996).

A parallel line of inquiry that merits research attention is the role of positive emotions in adversarial growth. While this has been noted in the literature (e.g., Frazier et al., 2001), and positive emotions have been shown to mediate the effect of trait resilience on buffering negative changes following the terrorist attacks of September 11, 2001 (Fredrickson, Tugade, Waugh, & Larkin, 2003), empirical work has not to date explored the role that positive emotions may play in adversarial growth. The available empirical evidence suggests this would be worthwhile: positive affect was consistently associated with growth across all the studies reviewed by Linley and Joseph (2004b; see also Chapter 2), and in an early study in the area, Vazquez, Cervellon, Perez-Sales, Vidales, and Gaborit (in press) showed that the experience of positive emotions played an important role in people's recovery following an earthquake and their experience of growth. We hypothesise that Fredrickson's (1998) broaden-and-build model of positive emotions may lend good theoretical and predictive validity to understanding more of the process of adversarial growth, through identifying some of the emotional pathways through which growth may arise (see also Folkman & Moskowitz, 2000).

Inherent in research of this nature are sampling and methodological considerations. The present study is somewhat restricted by sampling from college students, although numerous other studies that have shaped the growth literature have also used college

students (e.g., Park et al., 1996; Tedeschi & Calhoun, 1996), and there is evidence to suggest that the traumatic experiences of college students are comparable to those of people in the general population (Vrana & Lauterbach, 1994). Further, college student sampling is one of the few ways in which sufficient data can be collected for the more advanced mediational analyses reported here, and insufficient data is one of the problems that plagues research in this area (Frazier et al., 2004).

Second, the design was cross-sectional rather than prospective and longitudinal. Again, this is common to research in the area (Linley & Joseph, 2004b; Chapter 2). However, the criticism that the passage of time leads to inflated perceptions and reports of growth and positive change (McFarland & Alvaro, 2000) is not supported by the broader literature. For example, in the two studies reported here, time since the event was not associated with growth or positive change. Further, there is a growing body of evidence that testifies to the reliability and validity of post-event self-reports of experiences following trauma, using increasingly complex designs and methodologies to support these claims (Bramson, Dirkzwager, van Esch, & van der Ploeg, 2001; Dohrenwend et al., 2004; Krinsley, Gallagher, Weathers, Kutter, & Kaloupek, 2003). This has led to a growing consensus that such concerns are overstated (Chapter 2; Linley & Joseph, 2004b).

Overall, our findings provide some of the first empirical evidence to document the interactive role of emotions, coping, social support, and emotional intelligence in adversarial growth. The results of study one provide a possible explanation of the findings from the research evidence that greater subjective emotional experience of fear, horror, and helplessness, and greater emotional distress, are associated with

adversarial growth. Our findings suggest that emotion-focused coping, in the form of emotional venting and seeking emotional social support, partially mediate this relationship: emotion-focused coping is the generative mechanism through which adversarial growth may occur following negative subjective emotional experiences and emotional distress.

Our findings from study two point to intriguing future research directions. We explored the role of emotional intelligence in both adversarial growth and negative changes, and found emotional intelligence to be a stronger predictor of each outcome than any of venting, using emotional support, received social support, and social support satisfaction. These findings point to the potential utility of emotional intelligence as a factor in adversarial growth, and warrant further research attention to document these associations and mechanisms more fully. Given that there is some evidence to suggest that emotional intelligence can be "learned" (e.g., Salovey, Caruso, & Mayer, 2004), this finding points to one possible avenue through which adversarial growth may be facilitated: If therapists can work with people to improve their emotional intelligence, this may in turn facilitate the person's experience of growth. However, this remains speculative, and first, further replication and extension of these findings is required, before, second, research could investigate whether the improvement of emotional intelligence following an event would be efficacious in facilitating a person's adversarial growth, or whether, perhaps, it is specifically pre-event emotional intelligence that provides this mechanism for adversarial growth.

However, even given this optimism, we must note a caveat: The proportion of variance explained by the regression models we computed including emotional

intelligence remained stubbornly small, at around 10%, and hence there remains considerable scope for the identification of other variables that explain a greater proportion of the variance in adversarial growth, a key research direction we noted in Chapter 2.

These findings combined provide a more detailed understanding of the processes suggested, but not explicitly specified, by theoretical models of adversarial growth (Calhoun & Tedeschi, 1998; Schaefer & Moos, 1992, 1998). The role of emotion, particularly emotional distress, is central to these models, and how people manage this negative affective experience is central to how they may experience subsequent adversarial growth. Future research is encouraged to further explore the role of positive emotions in adversarial growth, as well as pursuing a more detailed understanding of the role of social support. Only through the development and testing of more complex interactive models will researchers be able to gain a fuller understanding of the complex interactions and processes that characterize people's experience of growth following trauma and adversity.

Chapter 4 Adversarial Growth and Chronic Psychological Distress Following Trauma: A Longitudinal Investigation

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4.1 Introduction

The distress that may follow psychological trauma is well known and has been extensively documented (e.g., Brewin, Andrews, & Valentine, 2000; Foa, Keane, & Friedman, 2000; Joseph, Williams, & Yule, 1997; van der Kolk et al., 1996). Following trauma, people may suffer from a range of psychiatric conditions, including depression, anxiety, and posttraumatic stress disorder (PTSD).

As was shown in Chapter Two, adversarial growth has been reported following a wide range of stressors. However, despite this growing body of evidence, research examining the associations between adversarial growth and distress following trauma is scant. Linley and Joseph (2004b) identified only eight studies that included a psychological distress variable (e.g., intrusion, avoidance, depression, anxiety). Notably, a posttraumatic stress disorder (PTSD) measure was reported in only one of the studies reviewed (Frazier et al., 2001): PTSD symptoms were negatively associated with growth at two weeks post-assault, but associations were non-significant at twelve months post-assault. Thus, despite the extensive literature on PTSD, its antecedents and consequences, there has been little attempt to integrate this with the adversarial growth literature.

The findings of these eight studies that included a psychological distress variable suggested an inconsistent pattern of associations, with psychological distress variables sometimes positively associated, sometimes negatively associated, and sometimes not associated with growth. Specifically, non-significant associations between depression and growth have been reported in persons suffering from accident or assault (Snape, 1997), breast cancer (Cordova et al., 2001), medical illness (Pargament et al., 1998), shipwreck (Joseph et al., 1993), and adolescents following a range of life events (Milam et al., 2004). Negative associations between depression and growth were found in survivors of sexual assault at both two weeks and twelve months post-assault (Frazier et al., 2001) and people of low socioeconomic status with HIV infection (Updegraff et al., 2002). Anxiety and growth were not associated in survivors of accident or assault (Snape, 1997), disaster (McMillen et al., 1997), shipwreck (Joseph et al., 1993), or people living with HIV infection (Updegraff et al., 2002). However, a combined measure of anxiety and avoidance was positively associated with growth in parents of children with paediatric leukaemia (Best, Streisand, Catania, & Kazak, 2001). The evidence is more consistent for associations between intrusions and avoidance, and growth. With the exception of Joseph et al. (1993), both aspects of posttraumatic cognitive processing are positively associated with growth in people with medical illnesses (Maercker & Langner, 2001) and following accident or assault, at both two and four months (Snape, 1997).

Of these studies, only two provided longitudinal information: Frazier et al. (2001) reported results from four time points post-assault (two weeks, two months, six months and twelve months), and Snape (1997) reported results for two months and four months post-event. However, Frazier et al. did not employ previously validated measures of PTSD or adversarial growth, while Snape (1997) did not include a PTSD measure. Hence, there is a need for research that uses validated measures in assessing the associations between adversarial growth and posttraumatic stress disorder specifically, and posttraumatic distress more generally, together with longitudinal documentation of how these associations may unfold over time. Finally, only Frazier et al. (2001) provided any evidence of how early reports of growth may be associated with later distress. This is clearly fundamental to any understanding of posttraumatic stress and adversarial growth that will be of utility to clinicians working with people who have been traumatized. This study thus sought to investigate how adversarial growth may predict posttraumatic distress over time in people suffering long term psychological distress following trauma.

Few studies have explored the causal relationships between growth and distress over time, and none have explored the generative mechanisms through which growth and distress may be related. Our focus in this study was to explore the associations between growth and distress over time, in a "real life" sample drawn from people who had been severely traumatised and were still experiencing distress. We were interested in the question of how growth and distress may be related throughout the process of adaptation following trauma, particularly in

people who were suffering chronic distress. While this approach does not allow a clean consideration of the pure longitudinal nature of adversarial growth, it is far more representative of the situation with which therapists may be faced in the real world: Dealing with clients who have experienced a range of events, at a varying range of times, and yet who are still presenting with psychological distress. Quite simply, we were interested in exploring the question of whether the experience of adversarial growth at any time would predict lower distress six months later. This is an applied question, of central interest to practicing therapists, rather than a pure research question that would permit a definitive understanding of the temporal course of adversarial growth.

As such, we sought to answer several questions that we considered to be relevant to an understanding of the longitudinal associations between growth and distress for applied practitioners working with the traumatised. For example, how does growth predict later distress, and specifically, which types of distress? These are fundamentally important questions, with important ramifications for our theoretical understanding of the associations between adversarial growth and posttraumatic distress. Further, they have valuable implications for potential clinical applications of adversarial growth (Calhoun & Tedeschi, 1999; Linley & Joseph, 2002; Linley & Joseph, 2004b; Taylor & Sherman, 2004; Tedeschi & Calhoun, 2004a). The present study investigated how adversarial growth predicted PTSD symptoms, anxiety, depression, and negative changes after six months in people suffering chronic psychological distress following trauma.

4.2 Method

4.2.1 Procedure

One hundred eighty-two questionnaire packs were distributed to members of a UK-based trauma support organization along with the organization's regular newsletter. Participants were invited to take part in a study of "*Psychological processes following trauma.*" No incentives were given for participation. Participants were invited, but not obliged, to provide their name and address if they would be prepared to take part in a further follow-up study after six months.

Completed questionnaire packs were received from 57 participants. Four packs were returned blank, and one was returned undelivered, giving a total response rate of 34%. Of these 57 respondents, 54 (95%) gave their details and indicated that they would be prepared to participate in the six month follow-up study. At the six-month follow up, participants were entered into a prize draw for a £20 (c. $36) gift voucher if they returned the completed follow-up survey.

4.2.2 Participants

Forty women and 17 men participated, with a mean age of 45 years (*SD* = 11.52, range 21 – 71 years). Respondents were typically married (44%), single (19%), or separated (16%), and all described their ethnic origin as White (one missing).

They had a range of educational backgrounds: GCE / O-level (21%); A-level (18%); Bachelor's degree (7%); Master's degree (4%), or a professional qualification (26%).

Participants indicated that they had experienced a mean of five traumatic events (from our checklist of thirteen events; *SD* = 2.32, range 1 – 11 events). Where participants had experienced more than one event, they indicated that event which they found the most upsetting. These events were serious accidents (14%), large fires or explosions (2%), violent crime (11%), unwanted sexual experiences (7%), military combat (2%), being in danger of serious injury or death (10%), witnessing others as they experienced events such as these (5%), traumatic bereavements (11%), other very traumatic experiences that the person did not wish to describe (9%), and other very traumatic events not otherwise specified (29%; these typically included multiple combinations of the events specified on the checklist). These events had occurred, on average, 11.42 years previously (*SD* = 13.73 years, range = 2 months – 51 years).

Thirty participants (53%) reported that they had a current diagnosis of PTSD, 13 participants (23%) did not, while 14 participants (25%) did not know. Seventeen participants (30%) had had a previous diagnosis of PTSD, while 28 (49%) had not and 11 (20%) did not know. Forty participants (70%) were currently on prescribed medication for their condition, while 49 (86%) were receiving some form of psychotherapy.

Forty of the original 54 participants (74%) completed the measures at the second time point, and are included in the Time 2 analyses reported below. In order to assess possible differences between non-responders and responders at Time 2, we entered all Time 1 study variables into a MANOVA. There were no significant differences between responders and non-responders at Time 2 on any of the study variables (all *p*s > .20).

4.2.3 Time 1 Measures (see Appendix 4.1)

Adverse and Traumatic Events Questionnaire (TEQ; Vrana & Lauterbach, 1994). We used a modified version of the TEQ that assessed nine specific types of traumatic events (accidents, natural disasters, crime, unwanted sexual experiences, military combat, emergency medical interventions, witnessing death or mutilation, diagnosis of serious or terminal illness, unexpected bereavement). These events have been identified within the traumatic stress literature as having the potential to elicit posttraumatic reactions – that is, posttraumatic stress or adversarial growth. In addition, we allowed respondents to maintain the confidentiality of their experience by including a category for events "like these" that the respondent did not wish to disclose. In cases of multiple reported traumas, participants indicated the event they found most upsetting, together with when this event occurred.

PTSD Symptom Scale (PSS; Foa, Riggs, Dancu, & Rothbaum, 1993). The PSS is a 17-item self-report measure of symptoms of posttraumatic stress disorder (PTSD). It is scored using a four-point Likert scale (0 = *Not at all or only once*; 3 = *5 or*

more times per week / almost always) to record the frequency of PTSD symptoms experienced within the last week. The PSS has three subscales: re-experiencing, avoidance and arousal. Higher scores indicate greater PTSD symptoms, but specific cut-offs for each subscale are required for a PTSD diagnosis. Originally developed in response to the DSM-III-R (APA, 1987) criteria for PTSD symptoms, the PSS can also be used in accordance with DSM-IV (APA, 1994) criteria by transferring one of the re-experiencing items to the arousal subscale. We followed that convention here.

Psychometric properties are good, with internal consistency reliabilities (α) of .90, .79, and .78 at T1, and .89, .81, and .83 at T2, for the re-experiencing, avoidance and arousal subscales respectively. Test-retest reliabilities over one month have been reported at .74 for the total scale, and .66, .56, and .71 for the three subscales respectively (Foa et al., 1993). For the purposes of the present study, we used the total scale scores as representative of PTSD symptoms. Internal consistency reliabilities were excellent at both time points (T1 $\alpha = .90$; T2 $\alpha = .91$).

Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979). A 15-item self-report measure of the frequency of intrusions (7 items) and avoidance (8 items) following a traumatic event. The IES is scored using a four-point Likert scale (0 = *Not at all*; 1 = *Rarely*; 3 = *Sometimes*; 5 = *Often*), recording how often the statements were true for the participant during the past week. Higher scores indicate greater levels of intrusion and avoidance. The IES is one of the most extensively used instruments in trauma research, and has good psychometric

properties (Joseph, 2000). Internal consistency reliabilities (α) for the present sample were .91 and .83 at T1 for intrusion and avoidance respectively, and .90 and .73 at T2. Test-retest reliability over one week was shown to be .89 for intrusion and .79 for avoidance (Horowitz et al., 1979).

Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983). The HADS is a 14-item self-report measure of anxiety (7 items) and depression (7 items). Internal consistency reliabilities for the present sample were .73 and .84 at T1 for anxiety and depression respectively, and .86 and .87 at T2.

Posttraumatic Growth Inventory (PTGI; Tedeschi, & Calhoun, 1996). A 21-item self-report measure of positive outcomes following traumatic experience, scored using a six-point Likert format scale (0 = "*I did not experience this change as a result of the event I described above*"; 5 = "*I experienced this change to a very great degree as a result of the event I described above*"). Sample items include "*I discovered that I'm stronger than I thought I was*", "*A sense of closeness with others*", and "*Appreciating each day*". The inventory yields a potential range of 0 – 105, with a higher score indicating greater experience of posttraumatic growth. The PTGI had very good internal consistency reliability (α) for the present sample, .94 at T1 and .91 at T2. Acceptable test-retest reliability over two months has been reported (r = .71, Tedeschi, & Calhoun, 1996).

Changes in Outlook Questionnaire (CiOQ; Joseph et al., 1993). A 26-item self-report measure of changes in outlook following a traumatic event, scored using a

six-point Likert format scale (1 = *Strongly disagree*; 6 = *Strongly agree*). The CiOQ has two sub-scales: Positive changes (11 items; e.g., "*I feel more experienced about life now*", "*I value other people more now*"), with a range of 11 - 66; and Negative changes (15 items; e.g., "*I no longer feel able to cope with things*", "*I have very little trust in myself now*"), with a range of 15 – 90. The CiOQ had good internal consistency reliability (α) for the present sample for both the Positive scale, .78 at T1 and .80 at T2, and the Negative scale, .87 at T1 and .88 at T2. Test-retest reliabilities have not been reported to date.

4.2.4 Time 2 Measures (see Appendix 4.2)

Participants completed identical measures as at Time 1. They also completed the 57-item Aspiration Index (Kasser & Ryan, 2001), as part of a separate study that is not reported here, and so is not included in Appendix 4.2.

4.3 Results

4.3.1 Data Analyses

Multiple hierarchical regression analyses were used to test for adversarial growth predicting later psychological distress (i.e., PTSD symptoms, anxiety, depression, intrusions, avoidance) and negative changes.

For each psychological distress variable, we entered the Time 1 psychological distress variable in the first block to predict the Time 2 psychological distress variable (six months later). In the second block, we entered the Time 1 psychological distress variable together with Time 1 CiOQ Positive Changes, in order to assess if the inclusion of CiOQ Positive Changes predicted the Time 2 psychological distress variable over and above the variance accounted for by the Time 1 psychological distress variable.

We also repeated these analyses, but including PTGI posttraumatic growth in the place of CIOQ positive changes. We adopted this strategy because of the exploratory nature of the study, which points to the need to investigate a range of possible outcomes, as well as an earlier suggestion that the CiOQ may measure more existential aspects of growth, and so may assess important aspects of growth that the PTGI fails to capture (Linley et al., in press).

4.3.2 Longitudinal Prediction of Psychological Distress and Negative Change from Adversarial Growth

The descriptive statistics for all measures are presented in Table 4.1. All T2 variables were significantly predicted by the T1 variable, even when controlling for time (βs = .54 - .89, ts = 3.75 – 10.60, all p<.001).

In order to test the longitudinal prediction of Time 2 psychological distress and negative change from Time 1 positive change, we used hierarchical multiple

regression analysis with entry of the predictor variables in two blocks. Six hierarchical regression analyses were conducted (for each of PTSD symptoms; anxiety; depression; intrusion; avoidance; negative changes), to assess the additional proportion of variance explained by the addition of CiOQ Positive Changes in predicting the psychological distress variable at Time 2, six months later. For each hierarchical regression analysis, the Time 1 psychological distress variable (e.g., PTSD symptoms; anxiety; depression; intrusion; avoidance; negative changes) was entered in the first block to predict the same psychological distress variable at Time 2. The prediction of Time 2 psychological distress from Time 1 psychological distress was consistently significant (see Table 4.2). In the second block, we entered the Time 1 psychological distress variable together with Time 1 CiOQ Positive Changes. As shown in Table 4.2, positive changes experienced at Time 1 predicted less PTSD symptoms, depression, anxiety and negative changes six months later, when controlling for initial levels of each of these variables.

Table 4.1. Descriptive Statistics for Study Variables (Time 1 / Time 2)

Variable	*M*	*SD*	*Observed Range*
HADS Anxiety	15.26 / 14.28	3.39 / 3.82	8-21 / 7-21
HADS Depression	10.93 / 10.82	4.92 / 4.88	0-21 / 2-21
IES Intrusions	23.95 / 22.50	9.99 / 10.32	0-35 / 0-35
IES Avoidance	22.58 / 21.93	10.18 / 8.54	0-40 / 6-38
PSS PTSD Symptoms	33.39 / 32.25	11.22 / 11.67	2-51 / 5-51
CiOQ Negative Changes	58.47 / 58.82	14.73 / 14.73	15-90/23-87
CiOQ Positive Changes	39.80 / 40.95	10.07 / 10.00	11-58/25-62
PTGI	52.81 / 54.63	27.02 / 22.81	7-105/13-98

Note. HADS = Hospital Anxiety and Depression Scale; IES = Impact of Event Scale; PSS = PTSD Symptom Scale; CiOQ = Changes in Outlook Questionnaire; PTGI = Posttraumatic Growth Inventory.

Time 1 PTGI posttraumatic growth was also entered together with each of the psychological distress variables in turn, in another six separate hierarchical regression analyses, to predict each psychological distress variable six months later. However, all analyses were non-significant (all *p*s>.05), and so are not considered further. We return to this issue of the differential findings with CiOQ positive changes and PTGI posttraumatic growth in the Discussion section below.

Finally, we also conducted hierarchical multiple regression analyses as described above, but with the inclusion of time since the event as a covariate, entered in block 2 with the Time 1 psychological distress variable and Time 1 CiOQ Positive Changes. This analytic strategy controlled for the time since the event, and so would have enabled a closer analysis of the temporal course of adversarial growth. However, with the inclusion of time as a covariate, the predictions of later psychological distress from Time 1 CiOQ Positive Changes were non-significant. Given the small sample size, and the wide variation in the times since the event, this is reasonably to be expected, and is an issue to which we return in the Discussion section below.

Table 4.2. Six Hierarchical Regression Analyses Predicting Time 2 Psychological Distress and Negative Change Variables.

	B	*SE (B)*	*β*	*t*	R^2	ΔR^2
Block 1:						
PSS PTSD Symptoms	.80	.13	.74	6.28***	.54	
Block 2:						
PSS PTSD Symptoms	.80	.11	.74	7.18***		
CiOQ Positive Changes	-.37	.11	-.34	-3.30**	.66	.12**
Block 1:						
HADS Anxiety	.72	.15	.65	4.84***	.42	
Block 2:						
HADS Anxiety	.68	.11	.62	6.40***		
CiOQ Positive Changes	-.18	.03	-.54	-5.56***	.71	.29***
Block 1:						
HADS Depression	.82	.09	.85	9.12***	.72	
Block 2:						
HADS Depression	.66	.11	.69	5.96***		
CiOQ Positive Changes	-.11	.05	-.25	-2.14*	.76	.04*

Block 1:						
IES Intrusions	.79	.12	.75	6.61***	.56	
Block 2:						
IES Intrusions	.80	.12	.75	6.51***		
CiOQ Positive Changes	.00	.11	.03	.23	.56	.00
Block 1:						
IES Avoidance	.43	.14	.49	3.17**	.24	
Block 2:						
IES Avoidance	.45	.14	.51	3.18***		
CiOQ Positive Changes	.00	.13	-.09	-.55	.25	.01
Block 1:						
CiOQ Negative Changes	.41	.15	.44	2.76**	.19	
Block 2:						
CiOQ Negative Changes	.38	.14	.40	2.83**		
CiOQ Positive Changes	-.61	.20	-.43	-3.01**	.38	.19**

Note. Time 1 psychological distress and positive change variables were entered to predict Time 2 psychological distress variables. HADS = Hospital Anxiety and Depression Scale; IES = Impact of Event Scale; PSS = PTSD Symptom Scale; CiOQ = Changes in Outlook Questionnaire. *p<.05, **p<.01, ***p<.001. ΔR^2 = Change in R^2.

4.4 Discussion

This is the first study that has used validated measures to explore the longitudinal associations between psychological distress and adversarial growth. Our findings indicate that the experience of positive psychological changes predicts later reductions in symptoms of PTSD, i.e., intrusion, avoidance, and arousal, and depression and anxiety, in people suffering chronic psychological distress following trauma. These findings replicate those of Frazier et al. (2001), but extend them to a more diversely traumatized population, with a wider range of longstanding and chronic complaints. Taking these findings with those of Frazier et al. (2001), this evidence suggests that positive psychological changes, characterized as adversarial growth, that are experienced at some point (either sooner or later) following trauma, will promote reductions in symptoms of psychological distress, such as PTSD symptomatology, depression, and anxiety. These findings have substantial clinical implications, and point toward the need for further research and replication in this area. If clinicians are able to identify and facilitate posttraumatic growth in their clients (Calhoun & Tedeschi, 1999; Tedeschi & Calhoun, 2004a), then this may be one way in which they can work to reduce their clients' psychological distress.

The relatively small sample size restricts the inferences that can be made from these data, due to problems of statistical power. Cohen (1992) indicates that the sample size of this study would only be able to detect large effects at $p<.05$. Hence, the theoretically interpretable results indicate the robustness of the

findings, and suggest that research employing larger samples may find even clearer associations than those reported here. Traumatic stress research is invariably dogged by these problems (Norris, 1996), and other studies have made valuable contributions using regression and mediation analyses with similar sample sizes to those reported here (Calhoun et al., 2000; Fredrickson et al., 2003).

The range of duration since the events reported by participants precludes consideration of the natural history of adversarial growth. However, the finding that positive changes predicted less PTSD symptoms, depression, anxiety, and negative psychological changes – across a range of time durations since the traumatic event – points to the clinical utility of this research. However, when time was included as a covariate in these analyses, the prediction of later psychological distress from Time 1 positive changes was non-significant. This precludes any generalisations that may be made about the temporal course of adversarial growth and its relations with psychological distress from a pure research perspective.

However, given the small number of participants, and the variation in time since the event, this finding is not surprising. For the results to have remained significant with the introduction of time as a covariate, in an analysis with a sample of this size, a very large effect size would have been needed (Cohen, 1992). The non-significant findings here point to the need for the replication of this research with a much larger sample, and possibly a more circumscribed

period of time since the event. This would allow greater statistical power, together with a greater ability to more reliably analyse the effects of positive changes on psychological distress, controlling for time since the event.

The differential findings for the PTGI and CiOQ Positive Changes measures also merits consideration. We found that adversarial growth as measured by the CiOQ, but not by the PTGI, predicted lower levels of psychological distress. This finding is similar to that reported in previous research, where the CiOQ has been shown to have associations with other variables that are not found with the PTGI (Linley et al., 2003; Linley et al., in press). It has been suggested that this may be because the CiOQ taps more of an existential element of growth that the PTGI does not, and it is this element that is central to many of the associations that are found between growth and distress, as well as other variables. Another explanation, and which may be particularly pertinent here, is that the PTGI was developed and validated with college students, whereas the CiOQ was developed from analysis of interview transcripts with survivors of a major transportation disaster. As such, the CiOQ items may be more accurately reflective of the growthful experiences of people who have experienced trauma, and may tap domains that are missed by the PTGI. Indeed, in another large longitudinal national survey of reactions following the September 11, 2001, terrorist attacks in the United States, the CiOQ Negative Changes scale was found to be the best predictor of distress (Butler, Koopman, Azarow, DiMiceli, & Spiegel, 2003). This finding parallels some of our own work (Linley et al., 2003; Linley et al., in press) and further suggests that the CiOQ may be a more sensitive measure of growth following trauma and adversity.

The study of the role of adversarial growth in predicting adjustment to traumatic events is a new avenue for the treatment of traumatic stress disorders. While early theorists have suggested how growth may be used in the alleviation of distress (e.g., Bretherton & ∅rner, 2001; Calhoun & Tedeschi, 1999; Linley & Joseph, 2002; Tedeschi & Calhoun, 2004a), the empirical research lags far behind. This study is only the second of which we are aware that explores the longitudinal role of growth in predicting later adjustment. It extends this research corpus, replicating previous research (Frazier et al., 2001) with a more diversely traumatized sample suffering from more longstanding psychological distress. It points toward the clinical utility of further empirical research to explore the therapeutic use of adversarial growth, and indicates new areas of therapeutic leverage in the alleviation of suffering in people who have been traumatized.

Chapter 5: The Positive and Negative Effects of Therapy Work on Therapists

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5.1 Introduction

Personal changes in therapists as a result of their work have a long anecdotal history (see e.g., Goldfried, 2001), but empirical evidence is only now beginning to accrue. Further, this empirical attention has been focused almost exclusively on the costs of caring, rather than the growth and positive change that therapists may themselves experience as they seek to facilitate these developmental experiences in their clients. These costs of caring have been labelled as burnout (Ackerley, Burnell, Holder, & Kurdek, 1988; Maslach & Jackson, 1982, 1984; Raquepaw & Miller, 1989) and compassion fatigue (Figley, 1999, 2002) in therapists generally, or as vicarious traumatisation (McCann & Pearlman, 1990) and secondary traumatic stress (Stamm, 1999) in therapists specifically working with the traumatised. The costs of therapy for the therapist have long been of concern, and the need for greater attention to therapists' self-care is a recurrent theme in the literature (Baker, 2003; Figley, 2002; Norcross, 2000).

The deleterious effects of working with the suffering of others have been reported across a range of helping professions other than therapists. These include rape victim advocates (Wasco & Campbell, 2002), ambulance services personnel (Clohessy & Ehlers, 1999), firefighters (Moran, & Britton, 1994), police officers (Mitchell, McLay, Boddy, & Cechi, 1991), and professional and voluntary

disaster response workers (Dyregrov, Kristofferson, & Gjestad, 1996). Within mental health professionals, there is evidence for the costs of caring from domestic violence counsellors (Iliffe & Steed, 2000) and especially therapists working with the traumatised (Chrestman, 1999; Jenkins & Baird, 2002; Kassam-Adams, 1999; McCann, & Pearlman, 1990; Ortlepp & Friedman, 2002; Pearlman, & Mac Ian, 1995; Schauben, & Frazier, 1995).

However, in parallel with the growing interest in positive psychology (Linley & Joseph, 2004a; Seligman & Csikszentmihalyi, 2000), there have also been changing perspectives in the study of traumatic stress. Just as trauma and suffering have been associated with a host of biological, psychological, and social costs (van der Kolk et al., 1996), there has been a growing empirical recognition of the potential for positive change that suffering can afford (see Chapter 2; Linley & Joseph, 2004b; Tedeschi et al., 1998, for reviews).

In an early study in the area of vicarious reactions, Raphael, Singh, Bradbury, and Lambert (1983-1984) examined disaster response workers attending the Granville rail disaster in Sydney, Australia. Of their 95 respondents, 33 reported that they felt more positive about their own life as a result of their disaster work. Similarly, Radeke and Mahoney (2000) described how, relative to research psychologists, professional psychologists reported more emotional exhaustion, but also felt more positive influence from their work, including feeling wiser and more experienced about life (cf. Linley, 2003; Smith, Staudinger, & Baltes, 1994). Likewise, members of the clergy consistently have to deal with the bereavement and

suffering of others, and it has been shown that this vicarious exposure can lead to posttraumatic growth (Profitt, Calhoun, Tedeschi, & Cann, 2002).

Specifically within the trauma therapy literature, there have been anecdotal suggestions of the potential growth and positive change that therapists may experience through their work with clients. For example, McCann and Pearlman (1990) presented vicarious traumatisation reactions as "an area of potential growth for the helper" (p. 146). Schauben and Frazier (1995) documented that through dealing with the existential issues that arose from working with traumatised clients, female rape counsellors appreciated witnessing the resilience and growth of their clients, "noting that they [the counsellors] also grow and change as a result of their work with survivors" (p. 62). Tedeschi and Calhoun (2004a) noted that "in listening to clients with respect for their strength and ability to change, we find ourselves changed for the better" (p. 416), a perspective shared by many of their colleagues (e.g., Arnold, Calhoun, Tedeschi, & Cann, 2000; Calhoun & Tedeschi, 1999; Linley et al., in press).

Just as vicarious traumatisation has been demonstrated in a range of therapists and others working with those in suffering, so Linley et al. (2003) hypothesised that positive changes may also be found following vicarious exposure. They surveyed a sample of 108 British citizens who had been vicariously exposed to the September 11, 2001 terrorist attacks through television viewing. These participants had no connection with the terrorist attacks other than their television viewing (i.e., they were not bereaved, nor did they know somebody who was, nor

were they on standby to provide assistance). They found that participants who more closely identified with the view that the attacks were an attack on their values and beliefs were more likely to report positive changes. They interpreted this empathic response as one of the possible mechanisms through which positive changes following vicarious exposure may be mediated. Specifically, it may be that a person's empathic engagement with the suffering of others increases that person's openness to positive and negative changes as a result of their vicarious exposure. A greater sense of connection with others, for example through an empathic response, renders one more likely to share that person's experience. This sharing of the experience, even through vicarious exposure, can then provide the trigger for both positive and negative changes, a phenomenon that has also been documented in husbands of women with breast cancer (Weiss, 2002).

In one of the early empirical studies that documented the potential for positive change in therapists as a result of their clinical work, Linley et al. (in press) explored the role of the personality construct sense of coherence. They hypothesised that, on the basis of a previous integrative theoretical review of personality constructs associated with adversarial growth (Linley, 2003), therapists with a higher sense of coherence would report less negative changes and more positive changes as a result of their trauma work. This hypothesis was supported.

However, while conceptually the potential for adversarial growth in therapists has been recognized, empirically this is a new phenomenon. A small body of literature

has accrued that documents the risk factors for negative changes in therapists as a result of their work with clients. However, there is no such research base that documents the facilitative factors that are associated with adversarial growth in therapists as a result of their work with clients. Further, from our comprehensive review of the adversarial growth literature in Chapter Two, it is clear that the presence of variables associated with negative changes does not automatically translate to the absence of those variables being associated with growth. The experience of positive and negative changes following adversity are better described as two independent dimensions of experience that are bivariate, that is, having a range of possible associations, rather than being bipolar, that is, having a consistently negative association (Linley & Joseph, 2004b; Chapter 2).

There is thus a need to understand more clearly the variables that are associated with adversarial growth and positive changes in therapists, and this study was designed to address this issue. We considered nine professional experience variables drawn from the previous literature: personal psychotherapy (previous or current); clinical supervision; personal trauma history; therapist gender; therapeutic training orientation; therapeutic practice orientation; the length of time respondents had been working as therapists; and their current workload as therapists. We also identified four salient psychosocial variables for investigation in their relation with adversarial growth in therapists: the sense of coherence personality construct; empathy; the bond from the working alliance; and social support. Taken together, these professional experience and psychosocial factors begin to suggest some of the factors that may influence the experience of positive

and negative changes in therapists as a result of their clinical work, and point toward implications for training and clinical practice.

5.2 Method

5.2.1 Procedure

Four hundred questionnaire packs were distributed by post to individual practitioners. Participants were selected from the clinical psychologist and counselling psychologist sections of *The Directory of Chartered Psychologists & The Directory of Expert Witnesses 2002/2003* (British Psychological Society, 2002), and the *Counselling and Psychotherapy Resources Directory 2002* (British Association for Counselling and Psychotherapy, 2002). Two hundred individual practitioners were randomly selected from each directory using the online Research Randomizer (www.randomizer.org).

Participants were invited to take part in a *Therapist Experiences Survey* regarding their experiences of working with their clients and how this work may have influenced them. The questionnaires within the pack were systematically varied across four different orderings to control for possible order effects. Responses were anonymous, although participants were invited to include their details separately for entry into a prize draw for a £25 (c. US $45) gift voucher of their choice.

One hundred fifty six completed questionnaires were returned, together with three questionnaires returned blank and two undeliverable, giving a total response rate of 40%. This compares with previous studies of therapists that have reported response rates ranging from 32% (Pearlman & Mac Ian, 1995) to 58% (Pope & Feldman-Summers, 1992).

5.2.2. Participants

Participants were 156 therapists (122 women, 34 men), ranging in age from 27 to 85 years (M = 53.67, SD =10.90). Participants were predominantly white (97%), and were married (64%), divorced (17%), or single (10%). They were qualified to diploma level (39%), Masters level (32%), or doctoral level (14%), and worked as therapists either part time (58%) or full time (42%). They had been working as therapists for between two and 40 years (M = 15.10, SD =8.71), and were currently spending an average of between one and 30 hours per week with their clients (M = 12.64, SD = 6.60). The majority of the sample had received personal therapy in the past (78%), but were not receiving personal therapy currently (77%), although they did have formal supervision or support for their work as a therapist (90%). Therapists either worked in individual practice (41%), in more than one practice setting (42%) (i.e., individual practice as well as either group, clinic, or hospital settings), or in a group (3%), clinic (4.5%) or hospital (4.5%) setting.

5.2.3 Measures (see Appendix 5.1)

Therapeutic Training and Practice Orientation. For each of "*client-centered / humanistic*", "*psychodynamic*", "*cognitive-behavioural*", "*existential*", "*transpersonal / spiritual*", "*integrative*" and "*eclectic*", participants indicated the extent to which their training had focused on the approach, and, separately, the extent to which their current practice drew from the approach. These responses were made using a four point scale (anchored *Not at all*; *A little*; *Moderately*; *A lot*).

Clinical Supervision, Personal Therapy, Personal Trauma History. Each of these areas was assessed using a dichotomous "yes / no" format: "*Have you previously received personal therapy to deal with the effects of your work as a therapist*?"; "*Are you currently receiving personal therapy to deal with the effects of your work as a therapist*?"; "*Do you receive formal supervision or support for your work as a therapist*?"; and "*Do you have a personal trauma history*?"

Crisis Support Scale (Joseph, Andrews, Williams, & Yule, 1992). A seven item measure of social support that taps both practical ("*Are people helpful in a practical sort of way*?") and emotional ("*Are you able to talk about your thoughts and feelings*?") support, and social support satisfaction ("*Overall, are you satisfied with the support you receive*?"). Participants were asked about the "support that you receive during your work as a therapist." Test-retest reliabilities

have not been reported, but a recent review endorsed the psychometric properties of the scale (Elklit et al., 2001). Higher scores indicate greater social support.

Jefferson Scale of Physician Empathy (JSPE; Hojat et al., 2002). A 20-item measure of therapist empathy, scored using a 7 point Likert format scale (1 = *strongly disagree*; 7 = *strongly agree*). The JSPE was selected in preference to the more general Interpersonal Reactivity Index (Davis, 1983) because it is more clearly anchored to the experiential world of the therapist, and so provides a more specific assessment of empathy within the therapeutic setting, rather than empathy as a general construct. Minor amendments were made so that the items were consistent with therapy rather than medical interventions. These included replacing "patient" with "client", and using the more general "treatment" rather than the specific "medical or surgical treatment." Sample items include *"I try to imagine myself in my clients' shoes when providing care to them*" and "*I try to think like my clients in order to render better care.*" Test-retest reliability over three-four months was reported at r = .65 (Hojat et al., 2002). Higher scores indicate greater empathy.

Working Alliance Inventory, Form T – Bond subscale (WAI-Bond; Horvath & Greenberg, 1989). For the present study we used the 12-item WAI-Bond, a measure of the positive personal attachments between the client and therapist, assessing themes such as mutual trust, acceptance, and confidence. Sample items include "*I am genuinely concerned for my clients' welfare*" and "*I appreciate my*

clients as people." Higher scores indicate a greater perceived bond between the therapist and their clients.

Professional Quality of Life Scales (ProQOL; Stamm, Larsen, & Davis-Griffel, 2002). A 30-item scale with three 10-item subscales assessing Burnout, Compassion satisfaction, and Compassion fatigue. Four items are reverse-scored. Sample items include: "*I feel overwhelmed by the amount of work or the size of my caseload I have to deal with*" (Burnout); "*I find it difficult to separate my personal life from my life as a helper*" (Compassion fatigue) and; "*I get satisfaction from being able to help people*" (Compassion satisfaction). Minor amendments were made to four items so that these items were general rather than trauma-specific. Higher scores indicate greater burnout, compassion fatigue, and compassion satisfaction respectively.

Sense of Coherence Scale – Short form (SOC-13; Antonovsky, 1987). A 13-item self-report measure of one's general orientation to life, scored using a seven-point (1–7) Likert format scale, giving a potential range of 13 - 91. Five questions have a negative formulation and are reverse-scored. The SOC-13 contains items assessing a person's perception of the world as comprehensible (five items, e.g., "*Do you have very mixed up feelings and ideas*?", scored 1 = *very often*, 7 = *very seldom or never*), manageable (four items, e.g., "*Do you have the feeling that you're being treated unfairly*?", scored 1 = *very often*, 7 = *very seldom or never*), and meaningful (four items, e.g., "*How often do you have the feeling that there's little meaning in the things you do in your daily life*?", scored 1 = *very often*, 7 =

very seldom or never). Higher scores indicate a greater sense of coherence (i.e., that the world is perceived as comprehensible, manageable, and meaningful). Test-retest reliability over six months was reported at $r = .77$ (Antonovsky, 1993).

Posttraumatic Growth Inventory (PTGI; Tedeschi, & Calhoun, 1996). A 21-item self-report measure of positive outcomes, scored using a six-point Likert format scale (0 = "*I did not experience this change as a result of my therapy work*"; 5 = "*I experienced this change to a very great degree as a result of my therapy work*"). Sample items include "*A sense of closeness with others*" and "*Appreciating each day*." All 21 items are positively scored, yielding a potential range of 0 – 105, where higher scores indicate greater experience of posttraumatic growth. Test-retest reliability over two months was reported at $r = .71$ (Tedeschi & Calhoun, 1996).

Changes in Outlook Questionnaire (CiOQ; Joseph et al., 1993). A 26-item self-report measure of positive and negative changes "*following your work as a therapist*", scored using a six-point Likert format scale (1 = *strongly disagree*; 6 = *strongly agree*). The CiOQ has two sub-scales: positive changes (11 items, e.g., "*I value my relationships much more now*"; "*I don't take life for granted anymore*"), and negative changes (15 items, e.g., "*I have very little trust in other people now*"; "*I feel very much as if I'm in limbo*"). The positive change subscale has a range of 11–66, and the negative change subscale a range of 15–90, with higher scores indicating greater reports of positive and negative changes respectively. Test-retest reliabilities have not been reported to date.

5.3 Results

5.3.1 Data Analyses

Group differences according to the professional experience variables of clinical supervision, personal therapy (previous or current), personal trauma history (all dichotomized, yes or no) and gender were assessed using four separate multivariate analyses of variance, with the professional experience variable used as the grouping variable in each analysis. Associations between therapeutic training orientations, therapeutic practice orientations, length of time working as a therapist, hours worked per week as a therapist, and the outcome variables (posttraumatic growth, positive changes, compassion satisfaction, negative changes, compassion fatigue, and burnout) were assessed using Pearson's correlation.

Associations between the psychosocial variables (sense of coherence, empathy, therapeutic alliance, and social support) and the outcome variables were assessed using Pearson's correlations. The prediction of each outcome variable from the psychosocial variables was estimated using six separate multiple regression analyses, with simultaneous entry of the four psychosocial variables to predict each of the outcome variables.

Given the early stages of empirical work exploring positive changes in therapists, we opted to use a .05 significance level for the analyses. While mindful of the potential inflation of a Type I error, we believe this is appropriate for the generation of areas of investigation that should guide future research at these early stages.

Table 5.1 provides the descriptive statistics for the study variables.

5.3.2 Professional Experience Variables and Therapist Changes

Personal therapy. Therapists who had either received personal therapy previously, or were receiving personal therapy currently, reported more posttraumatic growth and positive changes, and less burnout (see Table 5.2).

Clinical supervision. Participants who answered yes to the question "*Do you receive formal supervision or support for your work as a therapist?*" reported greater levels of posttraumatic growth (M = 65.82, SD = 20.05) than did therapists who answered no (M = 51.20, SD = 17.40) (F (1, 139) = 7.50, p<.01). All other group comparisons for the supervision variable were non-significant (largest F (1, 139) = 3.78, p>.05).

Personal trauma history. Therapists who answered yes to the question "*Do you have a personal trauma history?*" reported greater levels of posttraumatic growth (M = 71.61, SD = 17.38) than did therapists who answered no (M = 61.70, SD

=20.56) (F (1,136) = 5.60, p<.05). All other group comparisons for the personal trauma history variable were non-significant (largest F (1, 136) = 2.56, p>.10).

Gender. Women reported greater levels of posttraumatic growth (M = 66.97, SD = 19.61) than did men (M = 55.21, SD = 19.30) (F (1,141) = 8.41, p<.01). This was also the case for positive changes, with women reporting more positive changes (M = 48.29, SD = 6.68) than did men (M = 45.15, SD = 9.21), (F (1, 141) = 5.62, p<.05). All other gender comparisons were non-significant (largest F (1, 141) = 3.57, p>.05).

Therapeutic training and practice orientations. Therapists whose training was primarily transpersonal in orientation reported more positive personal changes as a result of their therapeutic work. In contrast, therapists whose training was primarily cognitive-behavioural in orientation reported less positive personal changes as a result of their therapeutic work. Similarly, therapists from a cognitive-behavioural training orientation reported significantly more symptoms of burnout as a result of their therapeutic work. This same pattern of findings also held for therapists' current therapeutic practice orientation (see Table 5.3).

Lifetime therapy work. Therapists who reported a greater length of time working as a therapist reported more negative changes (r = .16, p<.05) and more compassion fatigue (r = .20, p<.01). All other correlations were non-significant.

Table 5.1. Descriptive Statistics for Study Variables.

Variable	Alpha (α)	*M*	*SD*	Observed Range
Sense of Coherence (SOC)	.79	69.32	8.86	42-87
Empathy (JSPE)	.64	119.53	9.88	92-139
Therapeutic Bond (WAI-B)	.80	67.01	6.34	50-79
Social Support (CSS)	.79	38.93	5.97	15-49
Posttraumatic Growth (PTGI)	.94	64.42	20.08	0-105
Positive Changes (CiOQ)	.78	47.61	7.38	11-63
Compassion Satisfaction	.83	37.43	5.89	20-50
Negative Changes (CiOQ)	.80	24.95	7.87	15-60
Compassion Fatigue	.70	10.27	4.80	2-26
Burnout	.61	18.56	4.68	8-31

Note. SOC = Sense of coherence. JSPE = Jefferson Scale of Physician Empathy. WAI-B = Working Alliance Inventory – Bond subscale.

CSS = Crisis Support Scale. PTGI = Posttraumatic Growth Inventory. CiOQ = Changes in Outlook Questionnaire.

Table 5.2. MANOVA showing differences in Positive and Negative Therapist Changes according to Previous and Current Personal Therapy.

	Previous Personal Therapy				Current Personal Therapy			
Variable	Previous	*M*	*SD*	*F* (1, 140)	Current	*M*	*SD*	*F* (1, 140)
Positive Changes								
PTGI	Yes	67.18	19.29	8.75**	Yes	72.25	16.95	6.47*
	No	54.71	20.28		No	62.19	20.49	
CiOQ-P	Yes	48.53	7.09	9.06**	Yes	50.80	6.00	7.51**
	No	44.29	7.60		No	46.63	7.53	
CS	Yes	37.26	5.98	.15	Yes	38.80	5.68	1.85
	No	37.68	5.37		No	37.03	5.94	
Negative Changes								
CiOQ-N	Yes	24.54	7.97	.80	Yes	24.40	7.56	.10

	No	26.35	7.58		No	25.17	7.99	
CF	Yes	10.25	4.86	.00	Yes	9.91	5.00	.28
	No	10.53	4.55		No	10.39	4.77	
Burnout	Yes	18.19	4.41	4.46*	Yes	17.06	4.21	4.66*
	No	20.09	5.22		No	19.04	4.74	

Note. PTGI = Posttraumatic Growth Inventory. CiOQ-P = Changes in Outlook Questionnaire – Positive changes. CS = Compassion Satisfaction. CiOQ-N = Changes in Outlook Questionnaire – Negative changes. CF = Compassion Fatigue. *p<.05; **p<.01; ***p<.001.

Table 5.3. Therapeutic Training and Current Practice Orientation Correlates with Positive and Negative Therapist Changes

	Positive Therapist Changes			Negative Therapist Changes		
	PTGI	CiOQ-P	CS	CiOQ-N	CF	Burnout
Therapeutic Training						
Client-centered	.16*	.13	.05	-.10	-.01	-.03
Psychodynamic	.19*	.08	.02	-.12	-.08	-.06
Cognitive-behavioural	-.18*	-.19**	-.02	.10	.07	.29***
Existential	.13*	.03	-.02	.12	.08	.13*
Transpersonal	.34***	.28***	.19**	.03	-.04	-.09
Integrative	.17*	.18*	.05	-.08	.02	.06
Eclectic	.10	.13	.18*	.01	.04	.02
Current Practice						
Client-centered	.14*	.17*	.05	-.08	.03	.01
Psychodynamic	.10	.10	-.02	-.09	-.07	-.09
Cognitive-behavioural	-.16*	-.14*	.02	.11	.05	.20**
Existential	.13	.07	-.08	.05	.11	.11

Transpersonal	.24***	.19**	.18*	.03	.07	-.10
Integrative	.10	.11	.03	-.05	.10	.09
Eclectic	-.01	.04	.14*	.01	.07	.08

Note. PTGI = Posttraumatic Growth Inventory. CiOQ-P = Changes in Outlook Questionnaire – Positive changes. CS = Compassion Satisfaction. CiOQ-N = Changes in Outlook Questionnaire – Negative changes. CF = Compassion Fatigue. *p<.05; **p<.01; ***p<.001. All one-tailed tests.

Current therapy workload. Therapists who reported a greater number of hours per week spent with clients in therapy reported more posttraumatic growth (r = .23, p<.01) and more positive changes (r = .19, p<.05). All other correlations were non-significant.

5.3.3 Psychosocial Variables and Therapist Changes

The intercorrelations between the psychosocial variables and outcome variables are presented in Table 5.4. Sense of coherence, empathy, therapeutic bond, and social support were typically positively associated with positive therapist changes and compassion satisfaction, and typically negatively associated, or not associated, with negative therapist changes, compassion fatigue, and burnout (see Table 5.4).

Multiple regression of the therapist change variables on the psychosocial variables, with simultaneous entry of the four psychosocial variables, showed that the therapeutic bond was the strongest predictor of positive therapist changes and compassion satisfaction. In contrast, sense of coherence was the strongest predictor of less negative therapist changes and compassion fatigue, while sense of coherence and the therapeutic bond were the strongest predictors of less burnout (see Table 5.5).

Table 5.4. Intercorrelations between Study Variables.

	JSPE	WAI-B	CSS	PTGI	CiOQ-P	CS	CiOQ-N	CF	Burnout
SOC	.09	.42***	.35***	-.02	.18*	.29***	-.52***	-.47***	-.46***
JSPE	-	.31***	.15*	.25***	.24***	.33***	-.31***	-.02	-.12
WAI-B		-	.20**	.18*	.38***	.55***	-.24***	-.27***	-.44***
CSS			-	.08	.25***	.21**	-.30***	-.16*	-.29***
PTGI				-	.62***	.18*	-.16*	.02	-.07
CiOQ-P					-	.32***	-.20**	-.06	-.27***
CS						-	-.18*	-.11	-.44***
CiOQ-N							-	.32***	.36***
CF								-	.45***

Note. SOC = Sense of coherence. JSPE = Jefferson Scale of Physician Empathy. WAI-B = Working Alliance Inventory – Bond subscale. CSS = Crisis Support Scale. PTGI = Posttraumatic Growth Inventory. CiOQ-P = Changes in Outlook Questionnaire – Positive changes. CS = Compassion Satisfaction. CiOQ-N = Changes in Outlook Questionnaire – Negative changes. CF = Compassion Fatigue. *p<.05; **p<.01; ***p<.001. All one-tailed tests.

Table 5.5. Multiple Regression of Positive and Negative Therapist Change Variables on Psychosocial Variables.

	B	*SE (B)*	*β*	*t*	*R*	R^2
Positive Changes						
Posttraumatic Growth (PTGI)						
SOC	-.29	.21	-.13	-1.38	.30	.09
JSPE	.44	.17	.22	2.53*		
WAI-B	.45	.30	.14	1.49		
CSS	.23	.29	.07	.78		
Positive Changes (CiOQ)						
SOC	.00	.07	-.03	-.33	.43	.19
JSPE	.00	.06	.12	1.48		
WAI-B	.37	.11	.31	3.45***		
CSS	.23	.10	.18	2.22*		

Compassion Satisfaction						
SOC	.00	.05	-.44	-5.10***	.57	.31
JSPE	.00	.05	.16	2.20		
WAI-B	.43	.08	.45	5.53***		
CSS	.00	.07	.06	.85		
Negative Changes						
Negative Changes (CiOQ)						
SOC	-.41	.07	-.47	-5.96***	.59	.34
JSPE	-.20	.06	-.26	-3.54***		
WAI-B	.00	.10	.04	.48		
CSS	-.13	.10	-.10	-1.30		
Compassion Fatigue						
SOC	-.23	.05	-.44	-5.10***	.49	.24
JSPE	.00	.04	.05	.62		
WAI-B	.00	.07	-.13	-1.49		
CSS	.00	.06	.04	.49		

Burnout						
SOC	-.15	.04	-.27	-3.40***	.56	.32
JSPE	.00	.04	.03	.42		
WAI-B	-.26	.06	-.34	-4.22***		
CSS	.00	.06	-.12	-1.58		

Note. Sense of coherence, empathy, therapeutic bond, and social support were entered simultaneously to predict each positive and negative therapist change variable. PTGI = Posttraumatic Growth Inventory. CiOQ = Changes in Outlook Questionnaire. SOC = Sense of coherence. JSPE = Jefferson Scale of Physician Empathy. WAI-B = Working Alliance Inventory – Bond subscale. CSS = Crisis Support Scale. *p<.05; ***p<.001.

5.4 Discussion

This study provides the first comprehensive analysis of possible professional experience and psychosocial factors that influence both positive and negative psychological changes in therapists as a result of their clinical work. As we suggested in Chapter Two (see also Linley & Joseph, 2004b), the absence of risk factors for negative psychological changes following exposure to stressful life events does not automatically equate to the presence of protective factors or factors that are facilitative of growth and positive change. Rather, as our findings suggest, there may be separate and distinct pathways leading to positive and negative psychological changes. The literature dealing with the effects of therapy work on the therapist has almost exclusively focused on the deleterious effects of this work. However, recent trends suggesting a more positive focus in psychology (e.g., positive psychology; Seligman & Csikszentmihalyi, 2000) suggest there is also a need to address the possibility that therapists may experience positive changes as a result of their therapy work.

Nine professional experience factors were investigated, and found to be associated with positive and negative psychological changes in therapists. Therapists who either had been, or were currently receiving personal therapy in respect of their therapeutic work reported more positive psychological changes and less burnout. This finding suggests that personal therapy may be helpful in protecting therapists from negative changes, as well as facilitating therapists' positive changes and personal growth (cf. Macran, Stiles, & Smith, 1999). Greater levels of

posttraumatic growth were reported by therapists receiving clinical supervision, by therapists who had a personal trauma history, and by female therapists. These findings suggest that clinical supervision may facilitate posttraumatic growth in therapists, and further suggest that a personal trauma history is not simply a risk factor for vicarious traumatisation (Pearlman & Mac Ian, 1995), but may also be a facilitator of greater posttraumatic growth. The finding that female therapists reported higher levels of positive psychological changes is consistent with previous research in the adversarial growth field (Chapter Two; Linley & Joseph, 2004b).

Therapeutic training and practice orientations revealed consistent associations with both positive and negative psychological changes in therapists. Therapists of a humanistic and transpersonal orientation were more likely to report growth and positive change as a result of their therapy work. This finding makes intuitive sense, given that the theme of suffering providing opportunities for learning and growth is a central part of humanistic and transpersonal psychotherapy (Joseph, 2001). In contrast, therapists of a cognitive-behavioural orientation were significantly less likely to report growth and positive change, and significantly more likely to report symptoms of burnout. It may be that therapists of a cognitive-behavioural orientation work more typically with client groups displaying more severe and chronic psychological conditions, thus limiting the therapists' opportunities for growth. This finding requires replication, but suggests a potential area of concern, given the prevalence of cognitive-behavioural

orientations amongst current therapeutic training and practice within counselling and clinical psychology.

Therapists who had been doing therapeutic work for longer overall time periods reported more negative psychological changes and burnout, suggesting that a lifetime career in therapeutic work may not be conducive to personal satisfaction and growth. In contrast, therapists who worked a greater number of hours per week reported more growth and positive changes. This inference is not causal, and it would seem more likely that therapists who are benefiting from their work would take on greater caseloads, rather than greater caseloads facilitating growth and positive change.

Based on a review of the limited empirical evidence to date, we hypothesised that positive psychological changes in therapists would be associated with the sense of coherence personality construct, empathy, the therapeutic bond, and social support. These hypotheses were supported. Further analyses indicated that the therapeutic bond may be the key component in this relationship. Consistent with previous work (Linley et al., 2003), the therapeutic bond may represent the therapist's empathic connection with their clients, and thus serve as the channel through which the therapist experiences positive psychological changes in grappling vicariously with the suffering and distress of their clients. Future research could explore this question more fully by teasing out whether the therapeutic bond moderates therapists' exposure to their clients' distressing material and positive psychological changes in the therapist.

The empathy measure and its findings also require comment. While empathy predicted posttraumatic growth and fewer negative changes, these findings should be interpreted with caution. The measure employed in this study was amended from a scale developed to measure empathy in physicians, and the lower internal consistency reliability found here indicates that the measure may not be as appropriate for therapist populations. As such, the findings with this measure should be interpreted with caution, and future research should seek to include measures of empathy more closely suited to the therapeutic relationship, such as the Barrett-Lennard Perceived Empathy Scale (e.g., Barrett-Lennard, 1981) or the Truax Accurate Empathy Scale (e.g., Wenegrat, 1974). However, it should also be noted that these measures are not therapist self-report measures of trait empathy, but rather tools employed to assess empathy through the analysis of specific therapeutic relationships. As such, focusing on empathy in this way would necessitate a different methodological design to that we employed here.

The sense of coherence personality construct was found to be the factor most strongly negatively associated with negative psychological changes and compassion fatigue, while sense of coherence and the therapeutic bond were the factors most strongly negatively associated with burnout (cf. Linley et al., in press). Future research should explore whether a therapist's sense of coherence moderates their exposure to their clients' distressing material, and the therapist's negative psychological changes. An alternative hypothesis may be that therapists high in sense of coherence may report fewer of both positive and negative

changes: Fewer negative changes because they are more resilient; and fewer positive changes because they are already highly functioning, and so have less room for growth, a potential ceiling effect. This remains an intriguing question for future research, and points to the need for the development of measurement strategies to assess such a possibility.

The primary limitation of this study is its cross-sectional design, which precludes consideration of causal inferences. Hence, while we may suggest, for example, that therapeutic training and practice orientations predispose therapists to greater or lesser potential for positive and negative changes, this is likely confounded by other factors. These may include the therapists' personal characteristics that prompted them to pursue a particular theoretical orientation, and the nature of the client groups that therapists of different therapeutic orientations may work with.

The same issues apply to each of the relationships reported above, and further longitudinal research is required before a more comprehensive understanding of the process of positive and negative psychological changes in therapists can be reached.

In a related vein, one may also question whether the changes reported are valid, and also whether they may legitimately be ascribed to experiences in therapy work, as opposed to other life factors. This is a thorny issue, and is true of most research in the field of positive psychological changes following exposure to adverse and distressing events (Chapter Two; Linley & Joseph, 2004b). However,

the state of knowledge in this area does give grounds for optimism (Chapter Two; Linley & Joseph, 2004b).

The strengths of this study include its consideration of a range of psychosocial and professional experience variables that may be associated with both positive and negative changes in therapists, and it goes a long way toward providing a firm empirical foundation from which future research in this area may proceed.

Overall, these findings point to a range of professional experience and psychosocial factors that are associated with both positive and negative changes in therapists as a result of their therapy work. While further research is clearly needed and replication of these findings is required, there are potential implications for counselling and clinical practice. Given that the therapist is second only to the client as a factor predictive of therapeutic success (Wampold, 2001), it is imperative that therapists take steps to ensure that they are functioning at their best in the therapeutic relationship. Facilitating their own personal growth and avoiding negative changes and burnout is clearly one way in which this can be achieved.

Chapter 6: Positive and Negative Changes following Occupational Death Exposure

6.1 Introduction

As was considered previously in Chapter Five, there is a growing tradition within traumatic stress research that deals with the potential effects on the professionals involved of dealing with the suffering and distress of others, so called vicarious traumatisation or secondary traumatic stress. In this chapter, we consider another aspect of these vicarious reactions by exploring positive and negative changes in two groups who regularly face occupational death exposure: disaster workers and funeral directors.

In one of the earliest reports, Raphael et al. (1983-84) raised this issue of who helps the helpers, and what the effects on the helpers may be of dealing with situations of death, destruction and bereavement.

To date, this research corpus spans many of the professional groups who are likely to be exposed to, and have to deal with the death of others. This includes ambulance service personnel (Clohessy & Ehlers, 1999), police officers (Alexander & Wells, 1991), police technicians (Hyman, 2004), and firefighters (Brown, Mulhern, & Joseph, 2002).

Disaster workers provide a particular professional population who may have extensive exposure to the destruction and death that can result from a disaster. As such, they are perhaps one of the most consistently surveyed professional groups in respect of the negative effects of trauma exposure (e.g., Bartone, Ursano, Wright, & Ingraham, 1989; North et al., 2002; Schooler, Dougall, & Baum, 1999).

Specifically within this occupational group, research has often focused on the professionals' encounter with death, and with the body handling and body identification aspects of this work (e.g., Alexander & Wells, 1991; McCarroll, Ursano, Wright, & Fullerton, 1993). This is particularly salient because the magnitude of death and destruction is one of the most pertinent stressors for disaster personnel (Paton, 1994), consistent with reviews of traumatic stressors in the general population (Brewin et al., 2000; Rubonis & Bickman, 1991).

The death encounter is a central theme within the literature dealing with reactions in disaster workers and others, and its status as a primary predictor variable of posttraumatic reactions following disaster and trauma in the general population is well-established (cf. Rubonis & Bickman, 1991). Hence, it is a notable omission that no research (of which we are aware) has explored the role of a professional's attitudes toward death and the associations with their reactions following occupational death exposure. This is despite a body of more than 1,000 published articles dealing with the causes correlates, and consequences of death anxiety (Neimeyer, 1997-98), which is but one of a range of possible attitudes toward death (Wong, Reker, & Gesser, 1994).

Intriguingly, some authors have noted – often as an afterthought – that professionals also evidenced signs of personal growth and positive changes, often alongside the stresses they reported as a result of the work. For example, Raphael et al. (1983-1984) reported that of their 95 respondents who had dealt with a major rail accident, 33 felt more positive about their own life as a result of their disaster work. Within therapy research, McCann and Pearlman (1990) described vicarious traumatisation reactions as "an area of potential growth for the helper" (p. 146), and Schauben and Frazier (1995) showed that through dealing with the existential issues that arose, "they [the counsellors] also grow and change as a result of their work with survivors" (p. 62).

Within disaster research, Dyregrov et al. (1996) documented that the two most prevalent reactions to disaster work in both voluntary and professional helpers were the need to be close to loved ones, and the discovery of strengths within oneself. Anecdotal comments also indicated the workers' increased appreciation for their loved ones and for life itself. This is concordant with the existential view that a confrontation with death can often serve as a transformational medium that propels a person to more authentic functioning and personal growth (DeCarvalho, 1990; Linley, 2003; Yalom, 1980). As such, personal growth may be considered one of the psychological benefits of death exposure, and may be one of the rewards reported by disaster workers (Dyregrov et al., 1996) and funeral directors (Schell & Zinger, 1985). However, with the exception of the anecdotal and single-

item data reviewed above, research to date has not explored adversarial growth and negative changes as a result of occupational exposure to death.

The present study integrates work in occupational death exposure with the adversarial growth literature, and explores positive and negative reactions in professionals exposed to death, namely disaster workers and funeral directors. Based on a review of the adversarial growth literature and the salient aspects of the literature dealing with reactions in disaster workers and funeral directors, we identified a number of occupational and psychological variables for investigation in their association with positive and negative changes.

First, we consider the occupational variables that may influence workers' reactions. These include the length of time working in the profession, and the degree of occupational exposure through a range of items that cover body recovery, body identification, and body handling work with both deceased adults and deceased children.

Second, we consider the role of salient psychological variables. These include the subjective experience of fear, horror, and helplessness, symptoms of intrusion and avoidance, positive and negative affect, social support, and five different attitudes toward death. Workers' reactions were assessed according to their reported positive and negative psychological changes. We did not venture directional hypotheses, given the early nature of research in this area, but rather sought to generate directions for subsequent research.

6.2 Method

6.2.1 Participants

Disaster Workers. Participants were 56 disaster workers (35 men and 20 women, 1 missing; mean age = 45.08 years, *SD* = 11.75 years, range = 23.75 – 70.5 years). They were primarily married or living as married (70%), or single (18%), and were of White ethnic heritage (96%). Just over half of the sample (56%) reported that they had children. A majority was educated to the level of an occupational or professional qualification (68%). The disaster response workers were paid rather than volunteers, and were retained by a British disaster management company, which deployed them on an "as required" basis. The disaster workers had held this role for an average of 5.14 years (*SD* = 6.19 years, range = 5 months – 25 years), with their most recent deployment typically within the last 18 months. Given that the disaster workers were not employed full time by the disaster management company, but rather on an "as required" basis, we also assessed if their other jobs put them in professional situations dealing with death: 55% had worked (or were working) in another occupation dealing with death, while 23% had worked (or were working) in two other occupations. These participants had worked in these other professional occupations dealing with death for an average of 16.14 years (*SD* = 9.82 years, range 1.25 years – 43 years).

Funeral Directors. Participants were 78 funeral directors (70 men and 8 women; mean age = 50.05 years, *SD* = 11.66 years, range = 19.08 – 71.92 years). They were primarily married or living as married (80%), widowed (10%), or single (8%), and were all of White ethnic heritage. Most of the sample (90%) reported that they had children. A majority was educated to the level of an occupational or professional qualification (56%), particularly a Diploma in Funeral Directing, or Membership of the British Institute of Embalmers. The funeral directors primarily worked full time (91%), and had been in the position for an average of 21.20 years (*SD* = 13.40 years, range = 1.29 years – 50.33 years). Of the funeral directors, 15% had worked in another occupation dealing with death, while one person had worked in two other occupations. These participants had worked in these other professional occupations for an average of 11.60 years (*SD* = 8.14 years, range 3 years – 30 years).

6.2.2 Measures (see Appendices 6.1 and 6.2)

Exposure to the Bodies of Deceased Adults / Children. Participants indicated the frequency of their exposure to "*dead bodies in a professional capacity*", "*bodies at the scene of death*", "*bodies that were not easily identifiable*", "*bodies that had been horrifically damaged*", and "*people who had met a gruesome end*". These ratings were made separately for adults and children, and were scored using a five-point scale (0 = *Never*; 4 = *Very often*). Higher scores therefore indicate a greater frequency of occupational exposure to dead bodies.

Professional Work with Deceased Adults / Children. Participants indicated the extent to which they had been involved in "*body recovery work*", "*mortuary operations*", "*body identification work*", "*human remains processing*", "*disposition of human remains*", and "*mass burial and/or memorialization*". These ratings were made separately for adults and children, and were scored using a five-point scale (0 = *Never*; 4 = *Very often*). Higher scores therefore indicate a greater frequency of professional work with deceased adults and children.

Participants also completed measures of their professional experience of the disposition of personal effects (i.e., the identification of a deceased person's belongings, and their return to the next of kin), befriending (i.e., working supportively with the bereaved), and bereavement counselling. However, these are not included here, since we restrict the focus of our analyses to occupational death exposure.

Fear, Horror, and Helplessness. Participants indicated the extent to which they had ever felt "*afraid*", "*horrified*", and "*helpless*" when carrying out their professional activities. This was scored using a five-point scale (0 = *Never*; 4 = *Very often*). Higher scores indicate a greater subjective experience of feeling afraid, horrified, or helpless.

Impact of Event Scale (IES; Horowitz et al., 1979). A 15-item self-report measure of the frequency of intrusions (7 items) and avoidance (8 items) following a traumatic event. The IES is scored using a four-point Likert scale (0 = *Not at all*;

1 = *Rarely*; 3 = *Sometimes*; 5 = *Often*), recording how often the statements were true for the participant during the past week. Higher scores indicate greater levels of intrusion and avoidance. The IES is one of the most extensively used instruments in trauma research, and has good psychometric properties (Joseph, 2000).

Crisis Support Scale (CSS; Joseph et al., 1992). A seven item measure of social support that taps both practical ("*Are people helpful in a practical sort of way*?") and emotional ("*Are you able to talk about your thoughts and feelings*?") support, and social support satisfaction ("*Overall, are you satisfied with the support you receive*?"). Participants indicated their agreement with the items using a 1 ("*Never*") to 7 ("*Always*") scale. One item is reverse-scored, and the satisfaction item is scored separately. Participants were asked about the "*support that you receive during your work as a funeral director / disaster worker*" (amended appropriately for each survey). A recent review endorsed the psychometric properties of the scale (Elklit et al., 2001).

Positive and Negative Affect Scales (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item scale that measures 10 positive (e.g., "*interested*", "*excited*") and 10 negative (e.g., "*irritable*", "*nervous*") affects, using single adjectives that were rated on a 1 ("*very slightly or not at all*") to 5 ("*extremely*") frequency scale for the past week. The PANAS has excellent psychometric properties, and is one of the most widely used measures of positive and negative affect.

Death Attitudes Profile – Revised (DAP-R; Wong et al., 1994). The DAP-R is a 32-item measure of five death attitudes: Approach Acceptance (10 items, e.g., "*Death brings a promise of a new and glorious life*"); Fear of Death (7 items, e.g., "*The uncertainty of not knowing what happens after death worries me*"); Death Avoidance (5 items, e.g., "*I avoid thinking about death altogether*"), Escape Acceptance (5 items, e.g., "*I see death as a relief from the burden of life*"); and Neutral Acceptance (5 items, e.g., "*Death is simply a part of the process of life*"). Participants indicated their agreement with the items using a seven-point scale (1 = *Strongly disagree*; 7 = *Strongly agree*), hence higher scores indicate a greater agreement with the particular death attitude. The measure has been shown to have good test-retest reliability and convergent and discriminant validity (Wong et al., 1994).

Posttraumatic Growth Inventory (PTGI; Tedeschi, & Calhoun, 1996). A 21-item self-report measure of positive outcomes following "*my work as a funeral director / disaster worker*", scored using a six-point Likert format scale (0 = "*I did not experience this change*"; 5 = "*I experienced this change to a very great degree*"). Sample items include "*I discovered that I'm stronger than I thought I was*", "*A sense of closeness with others*", and "*Appreciating each day*". The inventory yields a potential range of 0 – 105, with a higher score indicating greater experience of posttraumatic growth. Acceptable test-retest reliability over two months has been reported (r = .71, Tedeschi, & Calhoun, 1996).

Changes in Outlook Questionnaire (CiOQ; Joseph et al., 1993). A 26-item self-report measure of changes in outlook, scored using a six-point Likert format scale (1 = *Strongly disagree*; 6 = *Strongly agree*). The CiOQ has two sub-scales: Positive changes (11 items; e.g., "*I feel more experienced about life now*", "*I value other people more now*"), with a range of 11 - 66; and Negative changes (15 items; e.g., "*I no longer feel able to cope with things*", "*I have very little trust in myself now*"), with a range of 15 – 90.

6.2.3 Procedure

Questionnaire packs were distributed to 320 funeral directors randomly selected from the membership directory of the UK National Association of Funeral Directors and 125 team members of a British-based disaster response company. Participants were invited to take part in a "*Funeral Directors Survey*" and a "*Disaster Response Survey*" respectively. The questionnaire packs always commenced with the professional experiences section, since other responses were keyed back to this. Subsequent sections were administered in four different orderings to control for possible response bias.

Completed questionnaires received by a specified date were entered into a prize draw for a £20 (c. $35) gift voucher for each survey. Participants were also invited to give their contact details if they would be prepared to participate in a follow-up survey after six months, although this is not reported here. Completed responses were received from 56 disaster response workers (a 45% response rate) and 78

funeral directors (a 24% response rate). These response rates are likely reflective of the response burden (typically 30 minutes or more), and the work pressures experienced by the sample, as indicated in unsolicited communications from a number of respondents.

6.2.4 Data Analyses

The associations between variables were explored using Pearson's correlation. Separate analyses were conducted for the disaster worker sample and the funeral director sample, for each set of occupational variables and psychological variables. We had considered combining the two samples to increase statistical power, but opted not to do so given the differences in study response rates for each sample, and the group differences on some variables that were revealed by a multivariate analysis of variance (reported below).

6.3 Results

The descriptive statistics for all study variables are presented in Table 6.1.

Table 6.1. Descriptive Statistics for Study Variables

	Disaster Workers			Funeral Directors		
Variable	*α*	*M (SD)*	*Observed Range*	*α*	*M (SD)*	*Observed Range*
Occupational variables:						
Length of Work (years)	-	5.15 (6.19)	0.42-25	-	21.20 (13.40)	1.29-50.33
Exposure to Deceased Adults	.88	13.77 (5.23)	0-20	.84	14.00 (3.49)	1-20
Exposure to Deceased Children	.87	9.85 (5.45)	0-20	.80	6.86 (3.56)	0-20
Work with Deceased Adults	.84	10.37 (6.45)	0-23	.76	9.27 (5.70)	0-23
Work with Deceased Children	.85	8.32 (6.21)	0-23	.83	5.40 (5.49)	0-23
Psychological variables:						
Fear	-	.64 (.95)	0-4	-	.57 (.76)	0-3
Horror	-	1.15 (1.03)	0-4	-	1.11 (.88)	0-4
Helplessness	-	.96 (1.15)	0-4	-	1.17 (1.10)	0-4
IES Intrusions	.89	5.96 (7.21)	0-35	.90	6.61 (8.19)	0-33
IES Avoidance	.83	2.94 (5.38)	0-30	.89	6.79 (8.46)	0-36

CSS Received Support	.89	35.22 (7.24)	16-42	.82	29.25 (7.14)	10-42
CSS Support Satisfaction	-	6.02 (1.47)	2-7	-	5.05 (1.65)	1-7
PANAS Positive Affect	.89	35.88 (7.72)	10-49	.84	36.31 (6.45)	20-50
PANAS Negative Affect	.81	14.62 (5.18)	10-35	.78	14.48 (4.64)	10-34
DAP-R Approach Acceptance	.97	37.44 (18.15)	10-70	.96	45.07 (16.21)	10-70
DAP-R Fear of Death	.84	20.89 (9.07)	7-44	.81	20.83 (7.91)	8-48
DAP-R Death Avoidance	.83	10.67 (5.21)	5-28	.72	12.29 (5.48)	5-28
DAP-R Escape Acceptance	.84	19.80 (7.70)	5-35	.80	21.32 (7.44)	6-35
DAP-R Neutral Acceptance	.56	29.35 (3.94)	16-35	.62	28.77 (4.56)	10-35
Outcome variables:						
PTGI	.96	39.88 (27.79)	0-105	.95	56.57 (24.86)	0-100
CiOQ Positive Changes	.88	45.55 (10.49)	20-66	.81	47.73 (8.60)	22-64
CiOQ Negative Changes	.86	24.68 (8.29)	15-47	.80	26.62 (8.60)	15-49

Note. IES = Impact of Event Scale; CSS = Crisis Support Scale; PANAS = Positive and Negative Affect Scales; DAP-R = Death Attitudes Profile – Revised; PTGI = Posttraumatic Growth Inventory; CiOQ = Changes in Outlook Questionnaire.

6.3.1 Group Differences

A multivariate analysis of variance revealed disaster workers had significantly more exposure to the bodies of deceased children (F = 6.46, p<.05) and had conducted significantly more work with deceased children (F = 4.68, p<.05). Disaster workers also reported significantly more received social support (F = 21.61, p<.001) and significantly higher social support satisfaction (F = 14.82, p<.001). In contrast, the funeral directors reported significantly more posttraumatic growth (F = 10.07, p<.01) (all F (1, 64) degrees of freedom). All other group differences were non-significant (next largest F = 3.13, p>.05). The group means are given for comparison in Table 6.1.

6.3.2 Disaster Workers

Psychological Variables. Greater posttraumatic growth was associated with more subjective experience of fear, horror, and helplessness, intrusions, and positive and negative affect. There were no significant associations between death attitudes and posttraumatic growth, although a non-significant trend suggested that an approach acceptance attitude toward death was associated with greater posttraumatic growth (see Table 6.2).

There were no significant associations with positive changes, but non-significant trends suggested that fear, horror, and helplessness, together with an approach

acceptance attitude toward death were associated with more positive changes (see Table 6.2).

Strong positive associations were found between negative changes and avoidance, negative affect, and attitudes toward death that were characterized by a fear of death or death avoidance. There was a significant negative association between positive affect and negative changes, and a non-significant trend for a neutral acceptance attitude toward death to be associated with fewer negative changes (see Table 6.2).

Occupational Variables. Correlation analyses did not reveal any significant associations between the occupational variables and the positive and negative change variables for the disaster worker sample.

Table 6.2. Intercorrelations of Psychological Variables and Positive and Negative Change Variables – Disaster Workers Sample (*n* = 56)

Variable	1	2	3	4	5	6	7
1. Fear	-						
2. Horror	.42**	-					
3. Helplessness	.58***	.60***	-				
4. IES Intrusions	.29*	.25+	.29*	-			
5. IES Avoidance	.35*	.19	.21	.57***	-		
6. CSS Received Support	-.13	-.39**	-.26+	-.22	-.37*	-	
7. CSS Support Satisfaction	-.05	-.09	-.14	-.34*	-.41**	.84***	-
8. PANAS Positive Affect	-.01	.03	.05	-.02	-.22	.15	.15
9. PANAS Negative Affect	.55***	.16	.45***	.20	.32*	-.05	.03
10. DAP-R Approach Acceptance	.20	-.18	.26+	-.18	-.12	.17	.15
11. DAP-R Fear of Death	.45***	.42**	.40**	.08	.28*	-.24	-.17
12. DAP-R Death Avoidance	.20	.15	.18	-.00	.33*	-.02	-.03
13. DAP-R Escape Acceptance	.16	.08	.14	.10	.22	-.04	.00
14. DAP-R Neutral Acceptance	-.11	-.12	-.20	-.01	-.08	.22	.13
15. PTGI	.33*	.26+	.46**	.41***	.24	-.03	-.05
16. CiOQ Positive Changes	.18	.23	.23	.13	.20	-.06	-.04
17. CiOQ Negative Changes	.47**	.21	.26	.05	.56***	-.01	-.06

Table 6.2. Intercorrelations of Psychological Variables and Positive and Negative Change Variables – Disaster Workers Sample (Cont.).

Variable	8	9	10	11	12	13	14
8. PANAS Positive Affect	-						
9. PANAS Negative Affect	-.11	-					
10. DAP-R Approach Acceptance	.17	.10	-				
11. DAP-R Fear of Death	-.13	.18	-.01	-			
12. DAP-R Death Avoidance	-.17	.19	.05	.37**	-		
13. DAP-R Escape Acceptance	-.16	.04	.48***	.17	.21	-	
14. DAP-R Neutral Acceptance	.20	.04	.15	-.61***	-.29*	-.10	-
15. PTGI	.35*	.38*	.28+	.04	.19	.03	.23
16. CiOQ Positive Changes	.15	.09	.18	.01	.10	-.03	.26
17. CiOQ Negative Changes	-.37*	.53***	.06	.41**	.68***	.27	-.30+

Variable	15	16	17
16. CiOQ Positive Changes	.56***	-	
17. CiOQ Negative Changes	.06	.01	-

Note. IES = Impact of Event Scale; CSS = Crisis Support Scale; PANAS = Positive and Negative Affect Scales; DAP-R = Death Attitudes Profile – Revised; PTGI = Posttraumatic Growth Inventory; CiOQ = Changes in Outlook Questionnaire. +p<.10; *p<.05; **p<.01; ***p<.001.

6.3.3 Funeral Directors

Psychological Variables. Greater posttraumatic growth was associated with more intrusions and avoidance, subjective experience of helplessness, positive affect, and an approach acceptance attitude toward death.

Positive changes were positively associated with an approach acceptance attitude toward death, and positive affect.

Negative changes were associated with greater subjective experience of horror and helplessness, intrusions and avoidance, negative affect, and attitudes toward death that were characterized by a fear of death or death avoidance. An approach acceptance attitude toward death and satisfaction with social support were associated with fewer negative changes, and there was a non-significant trend for social support to be negatively associated with negative changes (see Table 6.3).

Occupational Variables. Only exposure to the bodies of deceased adults was associated with more negative changes ($r = .29$, $p<.05$).

Table 6.3. Intercorrelations of Psychological Variables and Positive and Negative Change Variables – Funeral Directors Sample (*n* = 78)

Variable	1	2	3	4	5	6	7
1. Fear	-						
2. Horror	.42***	-					
3. Helplessness	.28*	.46***	-				
4. IES Intrusions	.21+	.18	.20+	-			
5. IES Avoidance	.19	.27*	.31**	.89***	-		
6. CSS Received Support	-.24*	-.20+	-.27**	-.25*	-.24*	-	
7. CSS Support Satisfaction	-.10	-.14	-.37***	-.34**	-.34**	.74***	-
8. PANAS Positive Affect	-.05	-.05	-.20	.05	-.02	.17	.15
9. PANAS Negative Affect	.39***	.22+	.26*	.46***	.40***	-.17	-.06
10. DAP-R Approach Acceptance	.00	-.11	-.19	-.08	-.05	.11	.17
11. DAP-R Fear of Death	.31**	.13	.23+	.34**	.40***	-.21+	-.15
12. DAP-R Death Avoidance	.17	.00	.11	.16	.28*	-.08	-.07
13. DAP-R Escape Acceptance	.08	.02	.04	.25*	.30*	.11	-.06
14. DAP-R Neutral Acceptance	-.31**	-.25*	-.21+	-.12	-.14	.39***	.25*
15. PTGI	.15	.19	.29*	.27*	.24*	.01	-.05
16. CiOQ Positive Changes	.05	.07	.05	.11	.13	.14	.16
17. CiOQ Negative Changes	.13	.21+	.37***	.26*	.26*	-.18	-.31**

Table 6.3. Intercorrelations of Psychological Variables and Positive and Negative Change Variables – Funeral Directors Sample (Cont.).

Variable	8	9	10	11	12	13	14
8. PANAS Positive Affect	-						
9. PANAS Negative Affect	.14	-					
10. DAP-R Approach Acceptance	.23	-.11	-				
11. DAP-R Fear of Death	-.01	.34**	-.06	-			
12. DAP-R Death Avoidance	-.10	.16	-.04	.58***	-		
13. DAP-R Escape Acceptance	.25*	.06	.39***	-.01	.12	-	
14. DAP-R Neutral Acceptance	.25*	-.01	.22+	-.12	.04	.24*	-
15. PTGI	.25*	.16	.27*	.07	-.09	.18	.14
16. CiOQ Positive Changes	.35**	.20+	.36**	-.05	-.08	.12	.09
17. CiOQ Negative Changes	-.17	.44***	-.27*	.55***	.34**	.11	-.15

Variable	15	16	17
15. PTGI	-		
16. CiOQ Positive	.66***	-	
17. CiOQ Negative	.19+	-.05	-

Note. IES = Impact of Event Scale; CSS = Crisis Support Scale; PANAS = Positive and Negative Affect Scales; DAP-R = Death Attitudes Profile – Revised; PTGI = Posttraumatic Growth Inventory; CiOQ = Changes in Outlook Questionnaire. +p<.10; *p<.05; **p<.01; ***p<.001.

6.4 Discussion

This study provides the first empirical evidence available for the associations between salient occupational and psychological factors and positive and negative changes in occupational groups who are exposed to death, namely disaster workers and funeral directors. The study builds on and substantially extends previous reports that have considered positive changes as an adjunct to other research questions, in samples of both disaster workers (Dyregrov et al., 1996; Paton, 1994; Raphael et al., 1983-84) and funeral directors (Schell & Zinger, 1985).

Our findings indicate that, contrary to the literature dealing with the traumatic stress effects of body handling and identification work (i.e., occupational variables), psychological variables such as intrusion and avoidance, affect, and attitudes toward death are more salient in their associations with positive and negative psychological changes following this work. Further, a broadly similar pattern of findings was demonstrated for both disaster workers and funeral directors, providing some initial replication of these findings.

These findings point to the role of cognitive processing in dealing with death, as evidenced by the associations found with intrusion (cf. Schooler et al., 1999) and avoidance. They further suggest that death attitudes may play a role in determining how people are likely to react following occupational exposure to death. An approach acceptance death attitude was typically found to be associated

with growth and positive change, whereas death attitudes characterized by a fear of death and death avoidance were consistently associated with negative changes. The absence of associations with social support is consistent with the majority of research on adversarial growth (Chapter 2; Linley & Joseph, 2004b), and mirrors the findings of other studies of disaster workers (e.g., North et al., 2002) and emergency responders (Hyman, 2004). Similarly, the associations found between positive and negative changes and positive and negative affect are consistent with previous work that has considered these variables with adversarial growth (Chapter 2; Linley & Joseph, 2004b), thus lending further external validity to the study findings.

As is common in work with similar populations (e.g., Dyregrov et al., 1996; Hyman, 2004) the recruitment of large sample sizes can be highly difficult to achieve, thus reducing the statistical power of the study. Hence, while the relatively low sample size has allowed the detection of some robust effects, it is probable that a larger sample size would have allowed smaller effects to be detected (Cohen, 1992). Thus, non-significant associations should be interpreted cautiously, and not ruled out from further research inquiry.

There is an ongoing debate as to the reliability and validity of retrospective self-report data in trauma research. However, a consensus is emerging that retrospective reports of traumatic events are generally consistent (Bramsen et al., 2001; Dohrenwend et al., 2004; Krinsley et al., 2003; Norris & Kaniasty, 1992). Similarly, a systematic review of the adversarial growth literature, drawing from a

range of experimental and methodological sources, concluded that concerns over the reliability and validity of retrospective self-report data in adversarial growth were largely overstated (Linley & Joseph, 2004b). There is undoubtedly merit in using multitrait-multimethod assessments in trauma and adversarial growth research. However, retrospective self-report data can largely be considered to be both valid and reliable, and is the most prevalent tool in work with these populations (e.g., Dyregrov et al., 1996; Paton, 1994; Schooler et al., 1999). As such, this methodology does not undermine research findings in this area, nor the traumatic stress and adversarial growth literature as a whole.

This study provides a foundation for research examining the occupational and psychological variables that are associated with positive and negative changes in disaster workers and funeral directors, two occupational groups who are systematically exposed to death as part of their work. The findings point to several salient research directions, the most important of which is a clearer understanding of the processes through which positive and negative changes arise, and the variables that are predictive of them. This points to the need for prospective longitudinal research, a common claim in traumatic stress research (Norris, 1996), but which may be more readily achieved when working with occupational samples. From a methodological perspective, the recruitment of participants as they began careers of occupational death exposure would allow a much deeper understanding of the complex processes involved in positive and negative changes following work of this nature. Crucially, in answering such questions, we will find ourselves far better informed in how best to help the helpers.

Chapter 7: What Does Not Kill Me Makes Me Stronger: Yalom's Ultimate Existential Concerns and Adversarial Growth

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7.1 Introduction

As was established in Chapter 2, there is a growing research tradition that testifies to the potential for positive change following trauma and adversity (see also Tedeschi & Calhoun, 2004b). However, the vast majority of this research has examined psychosocial variables that have been drawn from psychosocial models of adversarial growth, often from the coping and PTSD literatures. It is clear that none of these variables account for any substantial proportion of the variance in adversarial growth, leading Linley and Joseph (2004b; Chapter 2) to recommend two courses of action for future research. First, that the focus of research should include a greater understanding of multivariate models. This could be achieved through the examination of multiple variables, and their interactions, as mechanisms of growth and change, and could be tested through the analysis of potential mediators and moderators. Second, they proposed the investigation of novel variables, drawn from other areas of research beyond the psychosocial tradition, which may point to new ways of understanding the processes and mechanisms of growth.

The role of death and other existential issues is one such area that has been largely ignored by the empirical literature. This may be because much of the research on death, and people's attitudes toward death, has been characterised by a single dominant perception of death: death anxiety. Virtually all studies of death, and what people think about death, have focused on this perception of how people fear death, and hence worry about it (Neimeyer, 1997-1998). Similarly, within the PTSD literature, death has almost inevitably been considered from the perspective of how threats to life, death, and destruction are some of the best identified predictors of subsequent psychopathology (e.g., Brewin et al., 2000; Rubonis & Bickman, 1991). As such, within the empirical literature at least, death is traditionally viewed as something to be feared and avoided, rather than as a force containing significant power for potentially transformative positive change.

Within existential philosophy and psychology however, the death motif has a different valence (Bretherton & ∅rner, 2004; May, 1958 / 1994; Yalom, 1980). Here, death is regarded as a "given" of human existence, and the focus therefore shifts from death as a source of anxiety, to the acceptance of death as a necessity for fulfilled living. This theme can be found in the work of many influential philosophers and psychologists who have grappled with the topic of death. For example, Erikson (1963) described how we mature through different stages of ego development, the final one being ego integrity versus despair: mastery of the fear of death (leading to ego integrity); failure to master this fear of death, however, leads to despair. May (1981) described how one may reach a state of ultimate

despair (e.g., facing suffering and death), and that it is this despair that fuels a conversion to authenticity, or fulfilled living.

Drawing from a range of existential writers, Yalom (1980) identified four ultimate concerns, issues of such existential significance that he believed they underlay much of the human condition. These four ultimate concerns were death, isolation, meaninglessness, and freedom. Yalom argued that the fear of death lay at the root of many neuroses, and that of these four ultimate concerns, death was quintessential, underpinning each of the remaining three.

For example, isolation frightens people because, ultimately, we realise that we cannot die with anyone else, nor can anyone die in our place: we are fundamentally alone. As such, the experience of isolation reminds us of this vulnerability in the face of inevitable death. Similarly, meaninglessness is of such concern to people, Yalom (1980) argued, because the absence of meaning does not allow us to deal with our fear of death, through belief in an afterlife, for example, or through some other higher or greater purpose that would allow us to live on indefinitely. Freedom brings with it the burden of responsibility, and this can serve to remind people – if they choose to accept responsibility for themselves and their actions – that there is not an "ultimate rescuer", who will absolve us of responsibility, while simultaneously robbing us of our freedom; neither will such an "ultimate rescuer" be able to shield us from death, or the fear of death. As such, the three ultimate concerns identified by Yalom (1980) of isolation,

meaninglessness, and freedom, are believed to be so potent because they lead back, directly or indirectly, to our fear of death.

7.1.1 Experimental Examination of the Ultimate Concerns

While research has to date not explicitly nor specifically tested Yalom's (1980) theory, there is a sizeable body of empirical work that deals with the topics identified within it. We draw here from terror management theory and other selected studies to provide an illustrative overview of research dealing with death, isolation, meaninglessness, and freedom, the four ultimate concerns that Yalom identified.

7.1.1.1 Death

Terror management theory (TMT; e.g., Pyszczynski, Greenberg, & Solomon, 1999) draws extensively from the work of Becker (e.g., 1973) and the work of Rank (e.g., 1941), who both emphasised the central role that death concerns play in people's everyday lives. Indeed, Becker went so far as to argue that "of all the things that move man, one of the principal ones is his fear of death" (Becker, 1973, p. 11). In order to combat their fear of death, terror management theory argues, people seek identification with their social ingroup, distance themselves from their social outgroups, seek to bolster their self-esteem (as a sense of personal "specialness"), and defend their cultural worldview (since this provides a source of meaning for the person's existence that transcends their individual life).

Over 130 studies in nine different countries have supported these central tenets (Dechesne et al., 2003), and TMT research has shown how people employ proximal and distal defences to deal with conscious and unconscious death-related thoughts (Pyszczynski et al., 1999). Proximal defences include attempts to suppress thoughts about death or to bias rational inferential processes, by pushing death as a problem into the distant future. Distal defences address the problem of death more indirectly and symbolically by changing people's perceptions of themselves and the world of which they are a part. These proximal and distal defences have been shown to lead to the beliefs and behaviours that terror management theory has proposed (Pyszczynski et al., 1999). For example, people have been shown to cling to social ingroups (e.g., Arndt, Greenberg, Schimel, Pyszczynksi, & Solomon, 2002) and vigorously defend their cultural worldviews (e.g., Greenberg et al., 1990; Greenberg, Simon, et al., 1992; Greenberg, Solomon, et al., 1992), while also seeking to bolster their self-esteem (e.g., Greenberg et al., 1993; Harmon-Jones et al., 1997). All of these activities are designed to defend us against the fear of death, and as is discussed further below, they also link to the ultimate concerns of isolation (e.g., seeking identification with one's social ingroup) and meaninglessness (e.g., seeking to defend one's cultural worldview).

Further, in a variety of studies, fear of death and death anxiety have been shown to relate negatively to various aspects of well-being and self-actualization (e.g., Lester & Colvin, 1977; Neimeyer, 1985; Vargo & Batsel, 1981). Indeed, Yalom

(1980) went so far as to argue that death anxiety is a manifestation of unfulfilled strivings, and as such, is "inversely proportional to life satisfaction" (p. 207). Clearly, as theory and extant empirical research suggest, when one's fear of death is not mastered, psychological ill-being results.

7.1.1.2 Isolation

Close relationships are considered an integral part of human existence, and have been related to a fundamental need for belongingness (Baumeister & Leary, 1995) or relatedness (Deci & Ryan, 2000). From an evolutionary perspective, close relationships seem to be a result of natural selection processes, and as such convey survival and reproductive benefits (Buss & Schmitt, 1993). The successful formation of close relationships increases one's probability of mating success and environmental mastery, indicating that our human ancestors who were successful in this domain were more likely to reproduce and raise offspring to maturity, thus contributing to the survival of their genes (Baumeister & Leary, 1995; Buss & Schmitt, 1993). Further, Bowlby (1969) has argued that the human attachment system is an inner resource that allows us to deal with stress-inducing events and regulate distress. This view is comprehensively supported by converging evidence from biological, psychological, and social research (Taylor et al., 2000). As such, close relationships are legitimately considered to play a pivotal role in our survival (in evolutionary terms), and in our management of the fear of death (in modern terms).

This phenomenon has also been demonstrated experimentally. People with secure attachments sought greater intimacy with their partners when mortality salience was induced (Mikulincer & Florian, 2000). Mortality salience led to higher reports of relationship commitment; contextually salient thoughts about relationship commitment reduced the effects of a mortality salience induction; and inducing thoughts about problems in romantic relationships led to higher accessibility of death-related thoughts (Florian, Mikulincer, & Hirschberger, 2002). Most directly, thinking about the separation from, or death of a relationship partner, led to heightened death-thought accessibility, especially when thoughts were focused on long-term or final separations in people who scored high on attachment anxiety (Mikulincer, Florian, Birnbaum, & Malishkevich, 2002). Clearly, then, there is a perspective that supports Yalom's (1980) view of isolation as an ultimate concern, and more specifically, that isolation is an ultimate concern precisely because it exposes people to their fears about death. This perspective has been explicitly developed by Mikulincer, Florian, and Hirschberger (2003). They extend terror management theory's focus on self-esteem and the defence of cultural worldviews (both distal terror management mechanisms) to include close relationships as a more proximal terror management mechanism. Close relationships, they argue, protect us against our fear of death through providing a symbolic shield against this anxiety (Mikulincer et al., 2003).

7.1.1.3 Meaninglessness

The subject of meaning in life has been less systematically explored in relation to its role in the management of death fears. However, as Yalom (1980) spelled out, meaning may undo the negative effects of our death fears because it allows us to consider ourselves as part of something higher or greater than we are, and which will go on existing after we have died, thus lending us some sense of immortality with which to counter our fears of death. It is this notion that Lifton (1979) described as the "sense of symbolic immortality": being able to face death but without fear, and thus entering a state of transcendence. Frankl (1969) went further, and argued that meaning in life actually represents this experience of death transcendence. Hence, just as the presence of meaning in life serves to undo the negative effects of our fears of death, the absence of meaning in life, or meaninglessness, is a grave concern since it exposes us to these fears. In contrast, meaning in life has been shown to be positively related to psychological well-being (e.g., Zika & Chamberlain, 1992).

7.1.1.4 Freedom

Freedom is a difficult topic to operationalise within the terms of Yalom's (1980) theory. Most often regarded as a desirable state, freedom, at least from the self-determination theory perspective of autonomy (Deci & Ryan, 2000), has consistently been shown to be associated with a range of positive psychological outcomes. Freedom is also viewed as desirable from the robust finding that people

who live in nations with more freedoms are reliably happier (Veenhoven, 2004). More recently, theorists have begun to grapple with the idea of autonomy from an existential perspective (Ryan & Deci, 2004), and have shown how again this relates to attendant positive outcomes. However, this conceptualisation is not concordant with Yalom's approach, which focuses more on the burdens of freedom. Hence freedom, from Yalom's definition, has typically been ignored in the empirical literature.

7.1.2 Existential Approaches and Adversarial Growth

As discussed above, a substantial literature exists showing how people strive to defend themselves against death fears, and how these defences lead them to attempt to bolster their self-esteem, defend their worldview, and seek out close relationships as means of guarding themselves against their fear of death. However, it is only very recently that explicit links have been made and explored between facing death and its attendant positive outcomes.

The posttraumatic growth literature provides one such example, since here people have often experienced significant risk of imminent death, but instead have used this as a transformative experience for positive change, rather than as something to be feared (Chapter 2; Linley & Joseph, 2004b). A second population where this dynamic has been found is with people who have had near-death experiences (e.g., Noyes, 1980; Ring, 1984; Wren-Lewis, 2004). In both posttraumatic growth and near-death experiences, the encounter with one's mortality is used as a trigger

to re-evaluate one's values and what is considered important. These changes in attitude have been summarised under three broad headings of improved personal relationships, changes in self-perception, and shifts in life philosophy (Tedeschi et al., 1998).

However, it remains an open question why it should be that one category of death encounters should lead to broadly negative, insular outcomes (e.g., terror management theory's self-esteem bolstering and defence of cultural worldviews), while another should lead to broadly positive, expansive outcomes (e.g., posttraumatic growth and near-death experiences). This question was tackled by Cozzolino, Staples, Meyers, and Samboceti (2004), who argued that the differing outcomes were due to the nature of the mortality experience: within TMT paradigms, death anxiety is induced which is then defended against. However, in posttraumatic growth and near-death experiences, there is greater death reflection, and it is this reflection on death that leads to the positive changes that people report.

7.1.3 The Organismic Valuing Theory of Growth through Adversity

The only theoretical approach to growth through adversity that contains an explicit existential dimension is the organismic valuing theory proposed by Joseph and Linley (in press). This theory posits an intrinsic motivation toward growth, showing how this leads to the states of intrusion and avoidance that are characteristic of cognitive-emotional processing following trauma. The theory

shows how the organismic valuing process will automatically lead to the actualization of positive changes in psychological well-being (as distinguished from subjective well-being), through the positive accommodation of the new trauma-related information, provided that the social environment is able to support this positive accommodation process.

The theory argues that posttraumatic growth is a dimension of psychological well-being, rather than subjective well-being. More generally, subjective well-being has been defined as the balance of positive and negative affect, plus life satisfaction; and psychological well-being has been defined as engagement with the existential challenges of life (Keyes, Shmotkin, & Ryff, 2002; see also Ryan & Deci, 2001). As such, Joseph and Linley (in press) described how the negative affective experience of distress is best understood from a perspective of subjective well-being, whereas the experience of growth and positive personal change is best understood from a perspective of psychological well-being.

Further, the theory specifies how the social environment may be characterised by the satisfaction of three basic psychological needs for autonomy, competence, and relatedness, as described by self-determination theory (Deci & Ryan, 2000). Joseph and Linley (in press) suggested that, drawing from extensive research within self-determination theory (e.g., Deci & Ryan, 2000), the social environment could be operationalised using psychological need satisfaction as a proxy variable, especially psychological need satisfaction within relationships.

However, as a new theoretical approach, these proposals have yet to be subjected to empirical scrutiny.

7.1.4 Overview of Studies and Hypotheses

Drawing these various threads together, the present series of studies set out, first, to test the role played by Yalom's ultimate existential concerns in the experience of positive and negative changes following adversity; second, to explore some of the multivariate mechanisms through which these changes arise, including mediational pathways; and third, to provide initial tests of some of the tenets of the organismic valuing theory of growth through adversity.

In these studies we focused on the ultimate concerns of death, isolation, and meaninglessness. We did not include a consideration of the ultimate concern of freedom, since given the deeply philosophical and existential nature of this ultimate concern (i.e., freedom brings with it a burden of responsibility and the denial of the existence of an "ultimate rescuer"), it proved impossible to operationalise within the confines of the study.

7.1.4.1 Death

Implicit within Yalom's (1980) work and that of many other theorists in the area is the notion that death is something bad, negative, and to be feared and avoided. However, subsequent research and theory within the death literature has pointed

to a much broader conceptualisation of people's attitudes toward death beyond the traditional focus on fear of death and death anxiety, something which Neimeyer (1997-1998) indicated in his influential review paper as the most pressing need for future research. As such, we sought also to include assessment of a range of both negative, neutral, and positive death attitudes, and to this end used Wong et al.'s (1994) Death Attitudes Profile – Revised. This measures both negative (i.e., fear of death; death avoidance), positive (i.e., approach acceptance; death acceptance) and neutral (i.e., natural acceptance; neutral acceptance) attitudes towards death. We hypothesised that negative attitudes toward death (i.e., fear of death; death avoidance) would be positively associated with negative changes, and negatively associated with positive changes and psychological well-being. Given the absence of previous literature on this topic, we did not venture directional hypotheses for associations with positive attitudes toward death (i.e., approach acceptance; escape acceptance; natural acceptance; neutral acceptance), but rather sought to explore their associations with positive and negative changes and psychological well-being.

7.1.4.2 Isolation

Given our attempt to address aspects of existential theory as well as the organismic valuing theory of growth, we opted to use the Need Satisfaction in Relationships Scale (La Guardia, Ryan, Couchman, & Deci, 2000). This measures the satisfaction in relationships of basic psychological needs for autonomy, competence, and relatedness, and allowed assessment of the specific social

environment aspect of the organismic valuing theory, while also serving as a proxy for the ultimate concern of isolation (low need satisfaction has been shown to predict poor quality of relationships (La Guardia et al., 2000), thus, we suggest, leading to feelings of isolation). We hypothesised that the satisfaction of the basic psychological needs for autonomy, competence, and relatedness within one's closest relationship would be associated with positive changes and psychological well-being, and negatively associated with negative changes.

7.1.4.3 Meaninglessness

We assessed both the presence of meaning in life and the search for meaning in life (indicative of meaninglessness) using the Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2004). We hypothesised that the presence of meaning would be associated with more positive changes and psychological well-being, and with fewer negative changes. We hypothesised that the search for meaning would be associated with more negative changes, and fewer positive changes and psychological well-being.

7.1.4.4 Psychological Well-Being

Consistent with the organismic valuing theory of growth, we hypothesised that psychological well-being would be strongly associated, although not synonymous, with positive changes. We used the Psychological Well-Being Scales (Ryff, 1989; Ryff & Keyes, 1995) to test this prediction, since this measure is considered the

best way to assess engagement with the existential challenges of life. We also sought to further test the concordance between these two constructs by comparing their patterns of associations with other variables in the study.

7.1.4.5 Samples

In order to lend weight to our findings, we conducted the research with three diverse populations. First, we included a sample of churchgoers, who one may expect to have high meaning in life as a result of their religious commitment. Second, we included a sample from the general population, in order to generalise our findings more broadly. Third, we included a sample of funeral directors, in order to test our hypotheses with a specific population who have considerable experience of dealing with death, and hence may be expected to be much more aware and reflective of their own mortality.

7.1.4.6 General Data Analytic Strategies

7.1.4.6.1 General Analyses

For the purposes of the analyses reported below, we conceptualised death attitudes, meaning in life, and need satisfaction in relationships as independent, or predictor variables, and positive changes, negative changes, and psychological well-being as dependent, or outcome variables. We examined associations with each of fear of death and death avoidance, since within the classification of death

attitudes proposed by Wong et al. (1994), these two subscales both capture aspects of death fears.

Although the methodology of each study is cross-sectional, the language of regression analyses can be taken to imply causality: however, that is not our intention. Although it may seem to follow logically that negative death attitudes would lead to negative changes when confronted with trauma and adversity, we cannot definitively conclude that from the methodology employed here.

We used correlation analyses to test for associations between variables, and regression analyses following the recommendations of Kenny et al. (1998) to test our mediation hypotheses.

7.1.4.6.2 Multivariate Mediation Analyses

Consistent with the recommendations of Linley and Joseph (2004b; Chapter 2), and guided by the theoretical hierarchy of ultimate concerns proposed by Yalom (1980; i.e., that isolation and meaninglessness are ultimate concerns because they lead back to our fear of death), we sought to test multivariate mediational models. This analytic strategy takes a different approach to that employed within terror management theory studies to date, where a moderation, or buffering effect, has been tested.

Here, however, our focus was on the *generative mechanisms* through which death attitudes influenced positive and negative changes and psychological well-being. Specifically, as noted above, Yalom (1980) suggested that the ultimate concerns for meaninglessness and isolation caused us such anxiety because they reminded us of our mortality, and our fears of death. As such, our fear of death leads us to seek out meaning in life and form close relationships as ways of managing our death anxieties. The absence of meaning (i.e., meaninglessness) and the absence of close relationships (i.e., isolation) bring our death fears back to the fore. It was precisely this that led Yalom (1980) to formulate meaninglessness and isolation as ultimate existential concerns. Hence, it follows that having meaning in one's life, and having satisfying close relationships, offer mechanisms through which the negative effects of death fears on our well-being may be undone. Simply put, we sought to test which had the stronger effect: Do the negative effects of death fears unavoidably influence people, or can the positive effects of meaning in life and close relationships undo these negative effects of death fears? Our hypothesised mediational models would suggest that death anxieties (characterised here as fear of death and death avoidance) would lead people to seek meaning and close relationships as a means of dealing with this death anxiety. Those people who are successful in doing so would successfully manage these death anxieties, and hence would experience fewer negative changes and higher psychological well-being. Whether such a mediational model would explain the mechanism of positive changes remains an open question: the absence of prior research in this area points to the need for exploratory work here.

We tested these hypotheses through mediation analyses, following the recommendations of Kenny et al. (1998), and following similar analytic strategies employed in investigations of the role of positive emotions in resilience to stress (Fredrickson et al., 2003; Tugade & Fredrickson, 2004), and the undoing effects of positive emotions on negative emotions (Fredrickson, Mancuso, Branigan, & Tugade, 2000).

We hypothesised that the associations between death fears and negative changes would be mediated by close relationships and meaning in life. Specifically, we predicted that the positive effects of close relationships and meaning in life would cancel out, either partially or completely, the effects of death fears on negative changes.

Further, we sought to test the hypothesis that the positive effects of close relationships and meaning would undo the negative effects of death fears on psychological well-being, with the negative relationship between death fears and psychological well-being mediated by close relationships and meaning in life. Specifically, we predicted that the positive effects of close relationships and meaning in life would cancel out, either partially or completely, the negative effects of death fears on psychological well-being.

We also sought to explore possible mediational models with regard to the prediction of positive changes, but did not make any specific predictions here, given the absence of previous research in the area.

7.2 Study 1: Churchgoers

7.2.1 Method

7.2.1.1 Procedure

Surveys were distributed to people attending a range of mainstream Christian churches in the United Kingdom, together with reply-paid envelopes, allowing participants to complete and return the surveys at their leisure. The survey packs were presented in four different orders to control for order effects. Participants who returned the survey by a specified date were entered into a prize draw for a £25 (c. US $40) gift voucher. In total, 250 surveys were distributed, and 158 returned, giving a response rate of 63.2%. Additionally, nine participants were allocated to the sample for this study from the general population sample for study 2. This allocation was made on the basis that the participants identified with a religious denomination, and were active in attending a place of religious worship (at least once per month).

7.2.1.2 Participants

Participants (59 men, 108 women) were aged between 15 and 79 years (M = 41.02 years, SD = 15.83 years), primarily married / living as married (58%), or single (26%), of white ethnic background (96%), qualified to the level of a high school

qualification (19%), university degree (19%), or a professional or vocational qualification (42%), and were employed full time (48%), part time (21%), retired (14%), or were students (12%). Participants indicated their religious denomination as protestant (60%), Christian (34%), catholic (4%), or other (2%), and reported that they attended a place of religious worship, on average, once per week (86%), more than once per week (8%), or once per month (6%).

7.2.1.3 Measures (see Appendix 7.1)

Death Attitudes Profile – Revised (DAP-R; Wong et al., 1994). The DAP-R is a 32-item measure of five death attitudes: Approach Acceptance (10 items, e.g., "*Death brings a promise of a new and glorious life*"); Fear of Death (7 items, e.g., "*The uncertainty of not knowing what happens after death worries me*"); Death Avoidance (5 items, e.g., "*I avoid thinking about death altogether*"), Escape Acceptance (5 items, e.g., "*I see death as a relief from the burden of life*"); and Neutral Acceptance (5 items, e.g., "*Death is simply a part of the process of life*"). However, subsequent factor analytic work (Clements & Rooda, 1999-2000) has shown the Neutral Acceptance component to split into two separate components of Natural Acceptance (3 items, e.g., "*Death is simply a part of the process of life*") and Neutral Acceptance (2 items, e.g., "*Death is neither good nor bad*"). We used this revised six factor structure for the analyses reported here. Participants indicated their agreement with the items using a seven-point scale (1 = *Strongly disagree*; 7 = *Strongly agree*), hence higher scores indicate a greater agreement

with the particular death attitude. The measure has been shown to have good test-retest reliability and convergent and discriminant validity (Wong et al., 1994).

Need Satisfaction in Relationships (NSR; La Guardia et al., 2000). Three three-item subscales assess the satisfaction of psychological needs for autonomy (e.g., "*I feel free to be who I am*"), competence (e.g., "*I feel like a competent person*"), and relatedness (e.g., "*I feel loved and cared about*") in relationships. Participants were instructed to think of their closest relationship, whether with a spouse or partner, relative, or friend, and respond using a 1 ("*not at all true*") to 7 ("*very true*") scale, according to the stem "*When I am with…*". The subject of this close relationship was not given by the participants. Three items are reverse scored. Higher scores indicate greater satisfaction of that psychological need in the relationship.

For the mediation analyses reported below, we combined the three subscales to form a Need Satisfaction in Relationships total score. Principal components analysis of the three subscales revealed them all to load on a single component (eigenvalue = 2.06), which accounted for 69% of the variance. The component loadings ranged from .66 to .73.

Meaning in Life Questionnaire (MLQ; Steger et al., 2004). Two five-item subscales assess the search for meaning in life (e.g., "*I am searching for meaning in my life*", and the presence of meaning in life (e.g., "*I have a good sense of what makes my life meaningful*"). Participants completed the original 14-item version

(four items were excluded from the present scoring system, following the recommendations of Steger et al., 2004), scored using a 1 ("*absolutely untrue*") to 7 ("*absolutely true*") scale. One item is reverse scored. Higher scores indicate greater search for meaning, and presence of meaning, respectively.

Psychological Well-Being Scales (PWB; Ryff, 1989; Ryff & Keyes, 1995). Six nine-item subscales assess each of autonomy (e.g., "*I have confidence in my opinions, even if they are contrary to the general consensus*"), environmental mastery (e.g., "*I am quite good at managing the many responsibilities of my daily life*"), personal growth (e.g., "*I am not interested in activities that will expand my horizons*", reverse scored), positive relations with others (e.g., "*I enjoy personal and mutual conversations with family members or friends*"), purpose in life (e.g., "*I enjoy making plans for the future and working to make them a reality*"), and self-acceptance (e.g., "*I like most aspects of my personality*"). The total score can also be used as a composite measure of psychological well-being, a policy we adopted here. Participants responded to each item using a 1 "*strongly disagree*" to 6 "*strongly agree*" scale. Twenty-eight of the 54 items are reverse scored. Higher scores indicate greater psychological well-being. These scales are considered to provide the most comprehensive assessment of engagement with the existential challenges of life (Keyes et al., 2002).

Changes in Outlook Questionnaire (CiOQ; Joseph et al., 1993). A 26-item self-report measure of changes in outlook, scored using a six-point Likert format scale (1 = *Strongly disagree*; 6 = *Strongly agree*). The CiOQ has two sub-scales:

Positive changes (11 items; e.g., "*I feel more experienced about life now*", "*I value other people more now*"), with a range of 11 - 66; and Negative changes (15 items; e.g., "*I no longer feel able to cope with things*", "*I have very little trust in myself now*"), with a range of 15 – 90. This was keyed to the "most upsetting event that you have experienced within the last two years". We opted to use the CiOQ in preference to the Posttraumatic Growth Inventory for two reasons: first, because it assesses both positive and negative changes; and second, because it is considered to tap more existential elements of growth than does the PTGI (Linley et al., in press).

Participants also completed ten subscales assessing various aspects of need satisfaction (Sheldon, Elliot, Kim, & Kasser, 2001), and a 32-item measure of what they valued in life and the extent to which they had achieved these aspirations, but these are not reported here.

7.2.2 Results

All descriptive statistics for this sample, including internal consistency reliabilities (Cronbach's alpha), are presented in Table 7.1. Although the internal consistency reliability (α = 0.48) for the Neutral Acceptance subscale of the DAP-R fell marginally below the value of 0.50 regarded as minimally acceptable for internal consistency reliability (Nunnally, 1978), we opted to retain this given the exploratory nature of the study, and because due to the scale being composed of only two items, expectations for internal consistency reliability can be relaxed.

However, given this caveat, associations with neutral acceptance death attitudes in this study should be interpreted with caution.

Table 7.1. Descriptive Statistics for Study Variables – Churchgoers Sample

Variable	Mean	SD	Range	Alpha
Fear of Death	17.48	7.83	7-48	.83
Death Avoidance	12.04	6.68	5-34	.90
Approach Acceptance	62.53	8.16	26-70	.86
Escape Acceptance	26.31	6.42	6-35	.78
Natural Acceptance	18.87	2.59	6-21	.66
Neutral Acceptance	8.39	2.96	2-14	.48
Meaning in Life – Presence	30.15	4.42	10-35	.78
Meaning in Life – Search	15.59	8.19	5-35	.90
NSR – Autonomy	18.60	2.63	9-21	.58
NSR – Competence	17.62	3.04	9-21	.76
NSR – Relatedness	18.35	3.04	4-21	.68
CiOQ Positive Changes	48.84	7.39	23-64	.80
CiOQ Negative Changes	27.25	9.40	15-66	.85
Psychological Well-Being	250.23	28.08	169-316	.92

Note. NSR = Need Satisfaction in Relationships. CiOQ = Changes in Outlook Questionnaire.

Table 7.2. Correlations of Death Attitudes, Meaning in Life, and Need Satisfaction in Relationships with Positive Changes, Negative Changes, and Psychological Well-Being – Churchgoers

	Positive Changes	Negative Changes	Psychological Well-Being
Fear of Death	-.23**	.37***	-.28***
Death Avoidance	-.10	.34***	-.35***
Approach Acceptance	.17*	-.26***	.22**
Escape Acceptance	.15^	-.01	-.12
Natural Acceptance	.28***	.08	-.04
Neutral Acceptance	.09	-.05	.02
Meaning in Life – Presence	.21**	-.49***	.41***
Meaning in Life – Search	-.08	.43***	-.23**
NSR – Autonomy	.08	-.23**	.29***
NSR – Competence	.01	-.18*	.38***
NSR – Relatedness	.03	-.20*	.31***

Note: NSR = Need Satisfaction in Relationships. ***p<.001; **p<.01; *p<.05; ^p<.10.

7.2.2.1 Correlates of Positive Changes

Approach acceptance and natural acceptance death attitudes, and presence of meaning in life were all associated with more positive changes (see Table 7.2). Fear of death was associated with fewer positive changes.

7.2.2.2 Correlates of Negative Changes

Fear of death, death avoidance, and searching for meaning in life were all associated with more negative changes (see Table 7.2). An approach acceptance death attitude, the presence of meaning in life, and need satisfaction in relationships for all three needs for autonomy, competence, and relatedness, were associated with fewer negative changes.

7.2.2.3 Correlates of Psychological Well-Being

Fear of death, death avoidance, and searching for meaning in life were all associated with lower psychological well-being (see Table 7.2). An approach acceptance death attitude, the presence of meaning in life, and need satisfaction in relationships for all three needs for autonomy, competence, and relatedness, were associated with higher psychological well-being.

7.2.2.4 Correlations Between Dependent Variables

Positive changes and psychological well-being were positively associated, as hypothesised (r = .33, p<.001). Positive and negative changes were negatively associated (r = -.19, p<.05), as were negative changes and psychological well-being (r = -.50, p<.001).

7.2.2.5 Testing for Mediation

Kenny et al. (1998) described four steps to determine whether mediation has occurred. Step 1 is to show a significant correlation between predictor and outcome. Step 2 is to show a significant correlation between predictor and mediator. Steps 3 and 4 are accomplished with one regression analysis, with the outcome as the dependent variable, and with the predictor and mediator entered simultaneously to predict the outcome variable. Step 3 is that the mediator affects the outcome when the predictor is controlled for. Step 4 determines whether partial or complete mediation has occurred. Complete mediation is indicated when the effect of the predictor on the outcome is completely removed when the mediator is entered into the regression equation. If Steps 1-3 are satisfied, but Step 4 is not, partial mediation is said to have occurred.

7.2.2.6 Mediation Analyses

7.2.2.7 Negative Changes as the Dependent Variable

Presence of Meaning Partially Mediates Fear of Death on Negative Changes. Step 1 is to show a correlation between fear of death and negative changes. Table 7.2 shows that this criterion is met. Step 2 is to show a significant correlation between fear of death and presence of meaning (r = -.48, p<.001). When entered simultaneously into a regression analysis to predict negative changes (Steps 3 and 4), fear of death (β = .19, t (161) = 2.41, p<.05) was reduced in significance, but remained significant, while presence of meaning was a highly significant predictor (β = -.40, t (161) = -5.25, p<.001). This indicates that the presence of meaning partially mediated the association between fear of death and negative changes, suggesting that having meaning in one's life partly cancels out the effect of fear of death on negative changes.

Presence of Meaning Completely Mediates Death Avoidance on Negative Changes. Step 1 is to show a correlation between death avoidance and negative changes. Table 7.2 shows that this criterion is met. Step 2 is to show a significant correlation between death avoidance and presence of meaning (r = -.48, p<.001). When entered simultaneously into a regression analysis to predict negative changes (Steps 3 and 4), death avoidance was no longer significant (β = .12, t (161) = 1.58, *ns*), while presence of meaning was a highly significant predictor (β = -.43, t (161) = -5.50, p<.001). This indicates that the presence of meaning

completely mediated the association between fear of death and negative changes, suggesting that having meaning in one's life completely cancels out the effect of death avoidance on negative changes.

Need Satisfaction in Relationships Partially Mediates Fear of Death on Negative Changes. Step 1 is to show a correlation between fear of death and negative changes. Table 7.2 shows that this criterion is met. Step 2 is to show a significant correlation between fear of death and need satisfaction in relationships (r = -.20, p<.05). When entered simultaneously into a regression analysis to predict negative changes (Steps 3 and 4), fear of death (β = .34, t (161) = 4.63, p<.001) remained significant but was reduced in magnitude, while need satisfaction in relationships remained a significant predictor (β = -.18, t (161) = -2.39, p<.05). This indicates that need satisfaction in relationships partially mediated the association between fear of death and negative changes, suggesting that having satisfying close relationships partly cancels out the effect of fear of death on negative changes.

Need Satisfaction in Relationships Partially Mediates Death Avoidance on Negative Changes. Step 1 is to show a correlation between death avoidance and negative changes. Table 7.2 shows that this criterion is met. Step 2 is to show a significant correlation between death avoidance and need satisfaction in relationships (r = -.29, p<.001). When entered simultaneously into a regression analysis to predict negative changes (Steps 3 and 4), death avoidance (β = .30, t (161) = 3.87, p<.001) was reduced in significance, but remained significant, while need satisfaction in relationships remained a significant predictor (β = -.15, t (161)

= -2.02, $p<.05$). This indicates that need satisfaction in relationships partially mediated the association between death avoidance and negative changes, suggesting that having satisfying close relationships partly cancels out the effect of death avoidance on negative changes.

7.2.2.8 Psychological Well-Being as the Dependent Variable

Presence of Meaning Completely Mediates Fear of Death on Psychological Well-Being. Step 1 is to show a significant correlation between fear of death and psychological well-being. Table 7.2 shows that this criterion is met. Step 2 is to show a significant correlation between fear of death and presence of meaning (r = -.48, $p<.001$). When entered simultaneously into a regression analysis to predict negative changes (Steps 3 and 4), fear of death was no longer significant (β = -.11, t (161) = 1.30, *ns*), while presence of meaning was a highly significant predictor (β = .36, t (161) = 4.32, $p<.001$). This indicates that the presence of meaning completely mediated the association between fear of death and psychological well-being, suggesting that having meaning in one's life completely cancels out the effect of fear of death on psychological well-being.

Presence of Meaning Partially Mediates Death Avoidance on Psychological Well-Being. Step 1 is to show a significant correlation between death avoidance and psychological well-being. Table 7.2 shows that this criterion is met. Step 2 is to show a significant correlation between death avoidance and presence of meaning (r = -.48, $p<.001$). When entered simultaneously into a regression analysis to

predict psychological well-being (Steps 3 and 4), death avoidance (β = -.20, t (161) = 2.46, p<.05) was reduced in significance, but remained significant, while presence of meaning remained a significant predictor (β = .31, t (161) = 3.80, p<.001). This indicates that the presence of meaning partially mediated the association between death avoidance and psychological well-being, suggesting that having meaning in one's life partially cancels out the effect of death avoidance on psychological well-being.

Need Satisfaction in Relationships Partially Mediates Fear of Death on Psychological Well-Being. Step 1 is to show a significant correlation between fear of death and psychological well-being. Table 7.2 shows that this criterion is met. Step 2 is to show a significant correlation between fear of death and need satisfaction in relationships (r = -.20, p<.05). When entered simultaneously into a regression analysis to predict psychological well-being (Steps 3 and 4), fear of death (β = -.20, t (161) = 2.75, p<.01) was reduced in significance, but remained significant, while need satisfaction in relationships remained a significant predictor (β = .36, t (161) = 4.90, p<.001). This indicates that need satisfaction in relationships partially mediated the association between fear of death and psychological well-being, suggesting that having satisfying close relationships partly cancels out the effect of fear of death on psychological well-being.

Need Satisfaction in Relationships Partially Mediates Death Avoidance on Psychological Well-Being. Step 1 is to show a significant correlation between death avoidance and psychological well-being. Table 7.2 shows that this criterion

is met. Step 2 is to show a significant correlation between death avoidance and need satisfaction in relationships (r = -.29, p<.001). When entered simultaneously into a regression analysis to predict psychological well-being (Steps 3 and 4), death avoidance (β = -.28, t (161) = 3.75, p<.001) was reduced in significance, but remained significant, while need satisfaction in relationships remained a significant predictor (β = .31, t (161) = 4.29, p<.001). This indicates that need satisfaction in relationships partially mediated the association between death avoidance and psychological well-being, suggesting that having satisfying close relationships partly cancels out the effect of death avoidance on psychological well-being.

7.2.2.9 Positive Changes as the Dependent Variable

Meaning in Life does not Mediate the Effect of Fear of Death on Positive Changes. Fear of death was negatively associated with positive changes, satisfying Step 1 for mediation (see Table 7.2). Step 2 is to show a significant correlation between fear of death and presence of meaning (r = -.48, p<.001). When entered simultaneously into a regression analysis to predict positive changes (Steps 3 and 4), fear of death (β = -.17, t (161) = -1.99, p<.05) was reduced in significance, but remained significant, while presence of meaning was non-significant (β = .12, t (161) = 1.43, *ns*). Thus, the presence of meaning did not mediate the effect of fear of death on positive changes, whereas fear of death had a direct negative effect on positive changes: People with a greater fear of death reported fewer positive changes, irrespective of the meaning in their lives.

Need Satisfaction in Relationships does not Mediate the Effect of Fear of Death on Positive Changes. Fear of death was negatively associated with positive changes, satisfying Step 1 for mediation (see Table 7.2). Step 2 is to show a significant correlation between fear of death and need satisfaction in relationships (r = -.20, p<.05). When entered simultaneously into a regression analysis to predict positive changes (Steps 3 and 4), fear of death (β = -.23, t (161) = -2.96, p<.01) remained significant, while need satisfaction in relationships was non-significant (β = .00, t (161) = -.03, *ns*). Thus, having satisfying close relationships did not mediate the effect of fear of death on positive changes, whereas fear of death had a direct negative effect on positive changes: People with a greater fear of death reported fewer positive changes, irrespective of their close relationships.

Death Avoidance. Death avoidance was not associated with positive changes in this sample, and so the Step 1 requirement for mediation was not met.

7.2.3 Discussion

The findings from this study lend strong support to our first group of experimental hypotheses, namely, that fear of death, death avoidance, and searching for meaning in life would be associated with more negative changes, fewer positive changes, and lower psychological well-being. Associations between the presence of meaning in life, and need satisfaction in close relationships were in the hypothesised directions for negative changes (negative associations) and

psychological well-being (positive associations), but the absence of any relationship between positive changes and need satisfaction in close relationships provides an anomaly. It is not clear from these data why this may be, but we speculate that, given the nature of the sample (churchgoers), meaning in life may be a more salient factor in their psychological experiences. The correlational data appear to support this.

From the perspective of the organismic valuing theory of growth (Joseph & Linley, in press), it may also be the case that the churchgoers were congruent and functioning well (i.e., low neuroticism and anxiety) before the event in relation to which they reported their psychological changes. If so, the organismic valuing theory would predict that need satisfaction in relationships after the event (as we measured it here) would be a much less important factor in psychological change than it would have been had prior personality been more incongruent (which we did not measure here, and which would require a fully prospective longitudinal methodology). In statistical terms, it may be that need satisfaction in relationships moderates the association between prior personality and psychological changes: need satisfaction in relationships is more important when prior personality is incongruent, but is not so important when prior personality is congruent, and people are functioning well.

Further analyses revealed that the presence of meaning and the satisfaction of needs within close relationships both typically served to undo the negative effects of fear of death and death avoidance. This is consistent with our predictions,

based on Yalom's (1980) theory, and the experimental work of Mikulincer (e.g., Florian et al., 2002; Mikulincer et al., 2002) and work within terror management theory (e.g., Greenberg et al., 1990) that meaning in life and close relationships serve to undo the negative effects of death anxiety, broadly defined. Our mediation analyses showed that the associations between fear of death and death avoidance, and negative changes and psychological well-being, were typically completely or at least partially mediated by the presence of meaning in life and need satisfaction within close relationships. These findings indicate, consistent with theory and our hypotheses, that one of the ways in which people may manage their anxieties about death (e.g., fear of death, death avoidance) is through the adoption of beliefs which imbue their lives with meaning, or through seeking out satisfying close relationships as a symbolic shield against fears of death.

The positive association between need satisfaction in close relationships and psychological well-being, and the negative association between need satisfaction and negative changes, are consistent with the predictions of the organismic valuing theory of growth proposed by Joseph and Linley (in press). However, the absence of any association between need satisfaction and positive changes is an anomaly. This is a topic to which we return in the General Discussion below. Finally, the positive correlation between positive changes and psychological well-being again provides support for another prediction specified by the organismic valuing theory of growth, and is consistent with our hypotheses for this study. While there are some consistencies in the patterns of correlations for both positive changes and psychological well-being, these patterns are not so consistent as to

suggest that the two constructs are synonymous, at least as we have assessed them here. However, the patterns do indicate that it is appropriate to consider positive changes from the perspective of psychological well-being (Joseph & Linley, in press; Linley et al., in press).

7.3 Study 2: General Population

7.3.1 Method

7.3.1.1 Procedure

Surveys were distributed to as wide a range of participants as possible, using a snowball sampling technique, through which surveys were given to associates of the researchers, who were asked to distribute them to their own associates, and so on. Approximately half of the surveys returned were collected by undergraduate students, who were given course credit for the completed surveys they returned. Random checks were made to guard against the falsification of data through this method. The survey packs were presented in four different orders to control for order effects. Participants were invited to participate in a study examining how they lived their life and the things that were important to them, and were given a reply-paid envelope to enable the return of the completed survey at their leisure. Participants who returned the survey by a specified date were entered into a prize draw for a £25 (c. US $40) gift voucher. In total, 250 surveys were distributed,

and 128 returned, giving a response rate of 51.2%. However, nine of these participants were allocated to the study 1 sample, as described above.

7.3.1.2 Participants

Participants (41 men, 77 women, 1 missing) were aged between 18 and 75 years (*M* = 32.16 years, *SD* = 15.12 years), primarily single (49%) or married / living as married (39%), of white ethnic background (94%), qualified to the level of a high school qualification (50%), university degree (9%), or a professional or vocational qualification (19%), and were employed full time (31%), part time (11%), retired (7%), or were students (45%). Participants reported their religious denomination as none (58%) protestant (20%), catholic (11%), Christian (5%) or other (5%), and reported that they attended a place of religious worship, on average, never or less than twice per year (68%), twice per year (14%), or four times per year (18%).

7.3.1.3 Measures (see Appendix 7.1)

For this study, we employed the same measures described above for study 1.

7.3.2 Results

All descriptive statistics for this sample, including internal consistency reliabilities (Cronbach's alpha), are presented in Table 7.3.

7.3.2.1 Correlates of Positive Changes

Approach acceptance, neutral acceptance and natural acceptance death attitudes were all associated with greater positive changes (see Table 7.4). The presence of meaning in life was associated with greater positive changes, but there was no association between searching for meaning in life and positive changes. Need satisfaction in relationships of all three needs for autonomy, competence, and relatedness, were associated with greater positive changes.

7.3.2.2 Correlates of Negative Changes

An escape acceptance death attitude and searching for meaning in life were both associated with greater negative changes (see Table 7.4). A natural acceptance death attitude, the presence of meaning in life, and need satisfaction in relationships for all three needs for autonomy, competence, and relatedness, were associated with less negative changes.

Table 7.3. Descriptive Statistics for Study Variables – General Population Sample

Variable	Mean	SD	Range	Alpha
Fear of Death	28.88	9.48	7-48	.86
Death Avoidance	17.84	7.16	5-35	.90
Approach Acceptance	34.21	13.22	10-65	.93
Escape Acceptance	17.42	7.58	5-35	.87
Natural Acceptance	18.20	2.88	7-21	.85
Neutral Acceptance	9.02	2.96	2-14	.66
Meaning in Life – Presence	22.44	6.14	7-35	.83
Meaning in Life – Search	19.39	7.06	5-33	.89
NSR – Autonomy	17.78	3.27	6-21	.74
NSR – Competence	16.60	3.38	5-21	.73
NSR – Relatedness	17.45	3.48	6-21	.78
CiOQ Positive Changes	43.70	8.62	18-61	.83
CiOQ Negative Changes	36.90	12.42	15-75	.89
Psychological Well-Being	229.56	35.68	141-316	.95

Note. NSR = Need Satisfaction in Relationships. CiOQ = Changes in Outlook Questionnaire.

Table 7.4. Correlations of Death Attitudes, Meaning in Life, and Need Satisfaction in Relationships with Positive Changes, Negative Changes, and Psychological Well-Being – General Population

	Positive Changes	Negative Changes	Psychological Well-Being
Fear of Death	-.16^	.13	-.24**
Death Avoidance	-.09	.05	-.15
Approach Acceptance	.19*	-.11	.05
Escape Acceptance	-.07	.37***	-.30***
Natural Acceptance	.20*	-.25**	.29***
Neutral Acceptance	.24**	-.06	.08
Meaning in Life – Presence	.40***	-.57***	.61***
Meaning in Life – Search	-.01	.33***	-.45***
NSR – Autonomy	.24*	-.34***	.37***
NSR – Competence	.25**	-.45***	.44***
NSR – Relatedness	.23*	-.36***	.46***

Note: NSR = Need Satisfaction in Relationships. ***p<.001; **p<.01; *p<.05; ^p<.10.

7.3.2.3 Correlates of Psychological Well-Being

Fear of death, an escape acceptance death attitude, and searching for meaning in life were all associated with lower psychological well-being (see Table 7.4). In contrast, a natural acceptance death attitude, the presence of meaning in life, and the need satisfaction in relationships of the needs for autonomy, competence, and relatedness, were all associated with higher psychological well-being.

7.3.2.4 Correlations Between Dependent Variables

Positive changes and psychological well-being were positively associated, as hypothesised (r = .46, p<.001). Positive and negative changes were negatively associated (r = -.30, p<.001), as were negative changes and psychological well-being (r = -.67, p<.001).

7.3.2.5 Mediation Analyses

Steps 1 and 2 were not met for the correlations of fear of death and death avoidance with either positive changes, negative changes, or psychological well-being. Whereas fear of death was negatively associated with psychological well-being, it was not associated with the presence of meaning in life or need satisfaction in relationships. Hence, we were unable to proceed with testing mediation with this sample.

7.3.3 Discussion

The positive associations of presence of meaning in life and need satisfaction in close relationships, with both positive changes and psychological well-being, provides robust support for our hypotheses. The positive association between need satisfaction and positive changes is consistent with the predictions made by the organismic valuing theory of growth (Joseph & Linley, in press), but is in contrast to the findings of Study 1, where no association was found. Also of note are the death attitudes that were found to be associated with positive changes: approach acceptance, neutral acceptance, and natural acceptance. These more positively valenced death attitudes have not been typically considered within death theory, and our findings point to the intriguing possibility that there may be particular attitudes toward death that are actually conducive to positive change when faced with traumatic or adverse events. However, this remains speculative, and further research is needed to investigate these possibilities more fully.

Associations with negative changes were largely in the hypothesised directions, with more negative changes reported by people who were searching for meaning in their lives, and also those who held an escape acceptance attitude toward death. This death attitude is concerned with the notion of the afterlife being a better place than the current world, and so this association may reflect people who wish to avoid, rather than engage, the difficulties they face in living. This conjecture is supported by the negative association between escape acceptance and psychological well-being (characterised as engagement with the existential

challenges of life): people who are seeking to escape the burdens of their current life through death are clearly not engaged with the existential challenges that life presents. Further, a natural acceptance attitude toward death was associated with fewer negative changes, again suggesting that an existential engagement and acceptance may protect one against the negative effects of trauma and adversity. The presence of meaning in life, and need satisfaction in close relationships, were associated with fewer negative changes, consistent with our hypotheses and prior research, and also consistent with our findings from Study 1.

Again, the pattern of correlations with psychological well-being largely mirrored those found with positive changes, supporting the premise of the organismic valuing theory that these constructs may be considered related, although not synonymous. As noted, fear of death, an escape acceptance death attitude, and searching for meaning in life were associated with lower psychological well-being, whereas a natural acceptance death attitude, the presence of meaning in life, and need satisfaction in close relationships were associated with higher psychological well-being.

The absence of mediating relationships in this sample was due to the non-significant correlations between fear of death and death avoidance, and the outcome variables of positive changes, negative changes, and psychological well-being (psychological well-being was negatively associated with fear of death, but the absence of a significant relationship between fear of death and the presence of meaning in life and need satisfaction in relationships precluded a mediating

relationship). These findings are in contrast to Study 1, and point to the possibility that the religious people may have more salient death fears, which may be one reason for them having turned to religion. Inspection of the sample means shows that the groups differ significantly on fear of death and death avoidance, with the general population sample scoring highest on each of these aspects of death attitudes. This may suggest that the churchgoers were more engaged with and accepting of the reality of death, and that it was this mechanism that was influential in their experience of positive and negative changes. However, this remains a more specific question than can be answered with these data, and needs to be addressed by future research.

7.4 Study 3: Funeral Directors

7.4.1 Method

7.4.1.1 Procedure

Surveys were distributed to 350 members of the National Association of Funeral Directors (NAFD), drawn at random using the online research randomizer (www.randomizer.org) from the NAFD Membership Directory. The survey packs were presented in four different orders to control for order effects; however, the professional experiences section was always presented first, since other responses were keyed back to this. Participants were invited to participate in a "Funeral Directors Survey" and return their completed survey using the reply-paid

envelope provided. Participants who returned the survey by a specified date were entered into a prize draw for a £25 (c. US $40) gift voucher. Eighty-four completed surveys were returned, giving a response rate of 24%. This relatively low response rate is likely reflective of the high completion time (upwards of 30 minutes) required from busy professionals (as indicated by unsolicited comments on some of the returned surveys), but is consistent with other research conducted with this population (see Chapter 6).

7.4.1.2 Participants

Participants (64 men, 19 women, 1 missing) were aged between 24 and 77 years (M = 47.79 years, SD = 11.49 years), primarily married / living as married (83%), or single (10%), with children of their own (77%), of white ethnic background (99%), and were qualified to the level of a professional or vocational qualification (65%). Participants were primarily employed full time (95%), and had worked in their current position for between two years and 50 years (M = 20.52 years, SD = 11.89 years). A minority of participants (18%) had also worked, or were currently working in another professional capacity dealing with death and bereavement, and had been doing so for between four years and 40 years (M = 10.87 years, SD = 9.89 years).

7.4.1.3 Measures (see Appendix 7.2)

For this study, we employed the same measures described above for study 1, with three exceptions. First, we included the measures of occupational exposure to death and bereavement described below. Second, we did not include the Psychological Well-Being Scales, in order to reduce participant response burden. Third, participants did not complete the need satisfaction scales (Sheldon et al., 2001), but instead completed the Basic Psychological Needs Scale (Deci & Ryan, 2000), although again, this is not reported here.

Exposure to the Bodies of Deceased Adults / Children. Participants indicated the frequency of their exposure to each of "*dead bodies in a professional capacity*", "*bodies at the scene of death*", "*bodies that were not easily identifiable*", "*bodies that had been horrifically damaged*", and "*people who had met a gruesome end*". These ratings were made separately for adults and children, and were scored using a five-point scale (0 = *Never*; 4 = *Very often*). Higher scores therefore indicate a greater frequency of occupational exposure.

Professional Work with Deceased Adults / Children. Participants indicated the extent to which they had been involved in each of "*body recovery work*", "*mortuary operations*", "*body identification work*", "*human remains processing*", "*disposition of human remains*", and "*mass burial and/or memorialization*". These ratings were made separately for adults and children, and were scored using

a five-point scale (0 = *Never*; 4 = *Very often*). Higher scores therefore indicate a greater frequency of professional work with deceased adults and children.

Disposition of Personal Effects for Adults / Children. Participants indicated the extent to which they had been involved with each of the "*disposition of personal effects*" (i.e., the processing, identification, and return to the bereaved of a deceased person's belongings). These ratings were made separately for adults and children, and were scored using a five-point scale (0 = *Never*; 4 = *Very often*). Higher scores therefore indicate a greater frequency of personal effects work.

Befriending and Bereavement Counselling. Participants indicated the extent to which they had provided each of "*befriending*" and "*bereavement counselling*". These ratings were made for when the deceased were either adults or children, and were scored using a five-point scale (0 = *Never*; 4 = *Very often*). Higher scores therefore indicate a greater frequency of the provision of befriending and bereavement counselling.

Subjective Experience of Distress. Participants indicated the extent to which they had ever felt each of "*afraid*", "*horrified*", and "*helpless*" when carrying out their professional activities. This was scored using a five-point scale (0 = *Never*; 4 = *Very often*). Higher scores indicate a greater subjective experience of feeling afraid, horrified, or helpless. These three items were subjected to a principal components analysis. This revealed a single component (eigenvalue = 1.82) that accounted for 61% of the variance, with component loadings ranging from .75 to

.83. The three items were thus summed to produce a single "*Subjective Experience of Distress*" variable.

Need Satisfaction in Relationships (La Guardia et al., 2000). For the mediation analyses reported below, we combined the three subscales to form a Need Satisfaction in Relationships total score. Principal components analysis of the three subscales revealed them all to load on a single component (eigenvalue = 2.45), which accounted for 82% of the variance. The component loadings ranged from .80 to .84.

7.4.2 Results

All descriptive statistics for this sample, including internal consistency reliabilities (Cronbach's alpha), are presented in Table 7.5.

7.4.2.1 Correlates of Positive Changes

Approach acceptance, escape acceptance, and natural acceptance death attitudes, together with the presence of meaning in life were associated with more positive changes (see Table 7.6). There was a non-significant trend for greater subjective experience of distress to be associated with more positive changes. Of the need satisfaction in close relationships needs, only competence was significantly associated with more positive changes, although the remaining correlations were in the predicted direction.

Table 7.5. Descriptive Statistics for Study Variables – Funeral Directors Sample

Variable	Mean	SD	Range	Alpha
Fear of Death	20.53	8.01	7-43	.81
Death Avoidance	11.05	5.50	5-29	.86
Approach Acceptance	45.42	16.58	10-70	.97
Escape Acceptance	21.11	6.61	6-35	.78
Natural Acceptance	19.18	1.98	13-21	.64
Neutral Acceptance	10.17	2.61	3-14	.59
Meaning in Life – Presence	27.22	5.50	11-35	.89
Meaning in Life – Search	14.68	6.85	5-32	.87
NSR – Autonomy	17.88	3.44	9-21	.74
NSR – Competence	17.70	3.34	9-21	.70
NSR – Relatedness	17.32	3.65	6-21	.61
Subjective Experience	2.93	2.28	0-12	.66
CiOQ Positive Changes	49.72	7.14	29-66	.88
CiOQ Negative Changes	26.24	10.03	15-58	.75

Note. NSR = Need Satisfaction in Relationships. CiOQ = Changes in Outlook Questionnaire.

Table 7.6. Correlations of Subjective Experience of Distress, Death Attitudes, Meaning in Life, and Need Satisfaction in Relationships, with Positive and Negative Changes – Funeral Directors

	Positive Changes	Negative Changes
Subjective Experience of Distress	.21^	.25*
Fear of Death	.03	.44***
Death Avoidance	-.09	.31***
Approach Acceptance	.36***	-.16
Escape Acceptance	.31***	.11
Natural Acceptance	.21#	-.05
Neutral Acceptance	-.01	-.05
Meaning in Life – Presence	.40***	-.45***
Meaning in Life – Search	-.01	.32**
NSR – Autonomy	.13	-.48***
NSR – Competence	.23*	-.45***
NSR – Relatedness	.18	-.45***

Note: NSR = Need Satisfaction in Relationships. ****p*<.001; ***p*<.01; **p*<.05; #*p*=.05; ^*p*<.10.

7.4.2.2 Correlates of Negative Changes

Fear of death, death avoidance, searching for meaning in life, and the subjective experience of distress were associated with more negative changes (see Table 7.6). The presence of meaning in life, and the need satisfaction in close relationships of the needs for autonomy, competence, and relatedness were all associated with fewer negative changes.

7.4.2.3 Supplementary Analyses

We also computed correlations between the professional experience variables and positive and negative changes, to explore if there were particular aspects of working as a funeral director that were associated with either positive or negative changes. However, all correlations were non-significant at $p<.05$, with no trends evident. We also tested for effects of age and length of time working as a funeral director on positive and negative changes, but these correlations were also non-significant at $p<.05$, with no trends evident. The absence of these effects is consistent with other research (e.g., Chapter 6; Linley et al., in press; see Linley & Joseph, 2004b; Chapter 2; for review). Positive and negative changes were negatively associated in this sample ($r = -.26$, $p<.05$).

7.4.2.4 Mediation Analyses

Presence of Meaning Partially Mediates Fear of Death on Negative Changes. Step 1 is to show a significant correlation between predictor (here, fear of death) and dependent variable (here, negative changes). Table 7.6 shows that this criterion is met. Step 2 is to show a significant correlation between predictor and mediator: Fear of death was negatively associated with the presence of meaning (r = -.31, p<.01). Steps 3 and 4 are accomplished with one regression analysis. Consistent with Step 3, the presence of meaning was associated with negative changes when fear of death was controlled for (β = -.35, t (79) = -3.55, p<.001). The data indicate that the presence of meaning partially mediated the association between fear of death and negative changes, since fear of death remained significant when presence of meaning was entered into the regression equation to predict negative changes (β = .33, t (79) = 3.28, p<.01). This suggests that having meaning in one's life partly cancels out the effect of fear of death on negative changes.

Presence of Meaning Completely Mediates Death Avoidance on Negative Changes. We also assessed if the presence of meaning mediated the association between death avoidance and negative changes. Consistent with Steps 1 and 2, death avoidance was associated with negative changes (see Table 7.6) and with presence of meaning (r = -.35, p<.001). When simultaneously entered into the regression equation to predict negative changes, presence of meaning remained significant (β = -.42, t (79) = -3.90, p<.001), but death avoidance did not (β = .10,

t (79) = .93, *ns*). The data indicate that the presence of meaning fully mediated the association between death avoidance and negative changes, which suggests that having meaning in one's life completely cancels out the effect of death avoidance on negative changes.

Need Satisfaction in Relationships Does Not Mediate Fear of Death or Death Avoidance on Negative Changes. We also tested whether need satisfaction in relationships mediated the associations between fear of death and death avoidance, with negative changes. However, Step 2 was not met: the correlations between need satisfaction in relationships and both fear of death and death avoidance were non-significant.

7.4.2.5 Mediational Relationships and Positive Changes

The absence of significant correlations between fear of death and death avoidance, and positive changes, precluded any mediational relationships in the prediction of positive changes: Step 1 for mediation was not satisfied.

7.4.3 Discussion

Approach acceptance, escape acceptance, and natural acceptance death attitudes were all associated with more positive changes in this sample of funeral directors. This is broadly consistent with the findings from Studies 1 and 2, and indicates that approach acceptance and natural acceptance death attitudes particularly may

be conducive to the experience of positive changes. The association between escape acceptance and positive changes was not found in Studies 1 or 2, and may be an artefact of this sample: It is possible that an escape acceptance death attitude (i.e., that death is an escape from the burden of life) allows funeral directors to rationalise the death and bereavement they deal with on a daily basis, and reframe this in a positive light, that is, that the deceased "have been freed from the suffering of this life." Understood in this way, one can understand how an escape acceptance death attitude may be facilitative of positive changes in funeral directors, who are regularly dealing with the death of others, but may not be adaptive in other samples, who are presumably more concerned with thinking about their own death. In such cases, an escape from this life would indicate that they considered their current life to be a burden of suffering for them.

Again, the presence of meaning in life and need satisfaction in close relationships were associated with more positive changes, consistent with Study 2. The fact that only the association between need satisfaction for competence reached significance may be explained by the absence of sufficient power in this study, relative to the previous two studies. This study had a sample size of 84 participants, and so only has the power to detect large effect sizes at $p<.05$ (Cohen, 1992). As such, given a larger sample size, it is conceivable that the associations would have been found, especially when one considers that they are clearly in the hypothesised direction.

Consistent with the findings from Study 1, fear of death, death avoidance, and searching for meaning in life were associated with more negative changes. The presence of meaning in life and need satisfaction in close relationships were associated with fewer negative changes, consistent with both Studies 1 and 2. These findings are consistent with Yalom's (1980) theory, and further support our experimental hypotheses. It would seem that for funeral directors, as well as for churchgoers and members of the general population, having meaning in life and satisfying close relationships are both protective against negative changes following trauma and adversity.

This hypothesis was tested more directly through our mediation analyses. These showed that meaning in life mediated the associations between fear of death and death avoidance, and negative changes. This suggests that, as Yalom (1980) predicted, and as we hypothesised, people (in this case funeral directors) may use meaning in life to undo the negative effects of their death anxieties (i.e., fear of death, death avoidance). This finding was consistent with the mediational relationship demonstrated with the churchgoers sample in Study 1. However, with this funeral director sample we were unable to replicate the mediation of death anxieties and negative changes by need satisfaction in close relationships, and so this remains more of an open question.

7.5 General Discussion

Across three studies, our findings demonstrate the presence of meaning in life to be consistently associated with more positive changes, fewer negative changes, and greater psychological well-being. In contrast, searching for meaning in life was typically shown to be associated with more negative changes and lower psychological well-being. Fear of death and death avoidance (two key indicators of death anxiety) were consistently shown to be associated with more negative changes and lower psychological well-being. A mixed pattern of findings indicated that some attitudes toward death (e.g., approach acceptance, neutral acceptance, natural acceptance) were associated with more positive changes and psychological well-being, but this area requires further research scrutiny. However, the finding that any attitude toward death may be associated with positive changes and psychological growth is a novel finding within the death literature, and points to the value of broadening the scope of investigation beyond death anxiety and its negative consequences. As with so many topics, it is incumbent upon us to assess the positive as well as the negative aspects of human experience and functioning (Linley & Joseph, 2003, 2004c; Seligman & Csikszentmihalyi, 2000).

One of the key strengths of this research was the use of three diverse samples to address the research questions. This strategy allowed the identification of both convergent and divergent results across the studies, and so pointed to areas of clarity as well as directions for future research. The sample sizes also compare

favourably with much other research within the area of posttraumatic growth, although the funeral directors sample was smaller than would have been ideal. However, despite the limitations of statistical power that this inevitably brought about, we were able to demonstrate some robust findings, as well as drawing out consistencies with the earlier two studies, as well as with the research reported in Chapter 6.

However, a core limitation in almost all posttraumatic growth research, and one to which we have succumbed here, is the use of cross-sectional methodologies to answer questions which can only be definitively addressed through longitudinal, and ideally fully prospective longitudinal research (Linley & Joseph, 2004b; Chapter 2). However, given the early stage of research in this area, and the resource intensity of conducting prospective longitudinal research, there is a need to establish clearly the most fruitful lines of enquiry for future longitudinal research to address. This can be legitimately achieved through cross-sectional methods that also employ mediation analyses to allow something of the mechanisms of growth and positive change to be understood, an approach that Frazier et al. (2004, p. 21) described as "virtually nonexistent" within the extant research literature. We followed that approach here, and as a result identified core variables (meaning in life, fear of death, death avoidance, need satisfaction in relationships) that should be the focus of future longitudinal work that can incisively tease apart the processes and mechanisms of positive and negative change over time following trauma and adversity.

Our mediation analyses suggested that the influence of death fears on negative changes and psychological well-being may be undone by having meaning in one's life and satisfying close relationships. This supports our experimental hypotheses, based on Yalom's (1980) theory of ultimate existential concerns, and was most clearly demonstrated in the sample of churchgoers. The mixed findings with the funeral directors sample, and the absence of any mediating relationships with the general population sample, point to the need for a closer examination and replication of these findings. Inspection of the group means for fear of death, death avoidance, the presence of meaning in life, and need satisfaction in relationships shows that the churchgoers sample reported lower fear of death and death avoidance, together with a greater presence of meaning in life. This suggests that the generative mechanism of meaning in life may be most evident in undoing the negative effects of death fears when they are successfully deployed. Alternatively, it may be that the religious nature of meaning in life in churchgoers is particularly poignant in protecting us against death fears, and it is this, rather than a more general meaning in life, that is the core mechanism through which meaning protects us against death fears. This is concordant with Yalom's (1980) notion of an "ultimate rescuer", and also with the view that cognitive elements of religion allow us to make sense of the world and our place in it (i.e., meaning) (James & Wells, 2003).

These studies also provided the first empirical support of which we are aware for the organismic valuing theory of growth through adversity proposed by Joseph and Linley (in press). We demonstrated across each of the three studies that

positive changes and psychological well-being were associated, but not to such an extent that they should be considered synonymous. Further, the pattern of associations found for each of positive changes and psychological well-being were broadly similar, with interpretable deviations that were addressed within the discussion sections above. Finally, in support of this theory, we found in two of the three studies that need satisfaction in relationships was associated with more positive changes. The exception here was the churchgoer sample, which provides an interesting anomaly. Inspection of the means and standard deviations on the need satisfaction scores for each sample shows that the churchgoers sample reported both higher means and smaller standard deviations for each of the needs for autonomy, competence, and relatedness. This restriction in range may provide one statistical explanation for this finding.

Another explanation, as was considered above, is that need satisfaction in relationships may moderate the association between prior personality and subsequent psychological changes following an adverse event. That is to say, if a person is congruent and functioning well before an event, need satisfaction in relationships after an event is likely to play less of a role in their psychological changes following the event: their prior personality equips them sufficiently to deal with the psychological challenge. In contrast, for a person who is incongruent and poorly functioning before an adverse event, need satisfaction in relationships is likely to be a much more important factor in their adjustment and psychological change following the event: they do not have the foundation of a congruent prior personality, and so are much more likely to be influenced by their post-event

environment as they adapt and change following the event. As such, in a statistical sense we would say that need satisfaction in relationships moderates the association between prior personality and post-event psychological changes. This hypothesis has intuitive appeal, since it is well established that religion tends to have beneficial effects on mental health (James & Wells, 2003), and as such, it might reasonably be considered that, in the language of the organismic valuing theory of growth, religious people would have more congruent personalities prior to the adverse event they reported with regard to this research. However, these cross-sectional data do not allow us to address this question, and a fully prospective longitudinal design would be required to do so.

Alternatively, it may be that for the churchgoers sample, the meaning they experienced through their religious commitment provided a much more important component of their psychological armoury in dealing with trauma and adversity. With this increased emphasis on meaning (and possibly included therein their relationship with God), the churchgoers sample may have placed less relevance on the satisfaction they experience in their closest relationships. However, this explanation remains speculative and cannot be addressed by the current data. As such, it remains an avenue for future research, with a first goal being to replicate this finding.

In conclusion, this chapter has demonstrated empirical support for Yalom's (1980) theory that death is the ultimate existential concern that we must face as human beings, and that the negative effects of our fears of death may be undone

through having meaning in our lives and satisfying close relationships. These findings are also consistent with other previous research (e.g., Arndt et al., 2002; Greenberg et al., 1990; Mikulincer et al., 2002), but extend the findings for the first time to the domain of adversarial growth. The studies also indicated that there may be particular death attitudes that are conducive to growth, thus extending inquiry in this field to include a consideration of the facilitative roles that death attitudes may play in fostering personal growth and psychological well-being in the aftermath of trauma, adversity, and suffering. Further, this chapter has integrated diverse literatures from existential philosophy, existential psychology, terror management theory and self-determination theory, together with insights from the organismic valuing theory of growth, in adopting an existential approach to understanding the psychological experience of positive and negative changes following adversity.

Chapter 8: Conclusion: Adversarial Growth, the State of Knowledge

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8.1 Review of the Thesis

The thesis commenced with a systematic review of the empirical literature dealing with adversarial growth (Chapter Two), and provided a comprehensive introduction to the area, thus giving a solid foundation to the thesis. From this review, I was able to identify several areas of focus, which I then explored for the empirical work of the thesis.

Chapter Three examined the role of emotions in adversarial growth, and offered an explanation of the somewhat contradictory finding that greater distress was associated with greater growth by demonstrating that this association was mediated by emotion-focused coping. The subjective experience of distress appears to engender emotion-focused coping, and this emotional processing then promoted the experience of adversarial growth, as would have been predicted by the theoretical models of Calhoun and Tedeschi (1998) and Schaefer and Moos (1992, 1998). Further, the investigation of the role of emotional intelligence, a newcomer to the psychosocial literature, suggested that emotional intelligence may have an important role to play in understanding the mechanisms of adversarial growth: Emotional intelligence may be one of the factors that

promotes the effective deployment of emotion-focused coping, for growth thus to follow.

In Chapter Four, I sought to address the question of how the experience of positive changes at one point in time would predict negative changes and psychological distress six months later. While this methodology did not lend itself to pure research relating to the temporal course of growth, it does more accurately represent the reality of the experience of a therapist when confronted with a client following trauma. The findings of this study indicated that the experience of positive changes predicted lower psychological distress and fewer negative changes after six months, thus suggesting that the facilitation of positive changes at any time point may provide therapeutic leverage.

Picking up on the need for greater exploration of vicarious processes in adversarial growth, in Chapter Five I turned to the examination of positive and negative changes in therapists as a result of their therapy work. Drawing from the psychotherapy and vicarious traumatisation literatures, I focused on professional experience variables and psychosocial variables that may influence the experience of adversarial growth. The findings pointed to the working alliance as a core channel through which therapists may experience positive changes, indicating that engagement with one's clients is one of the factors necessary for one to be influenced vicariously by the client's experiences.

This theme continued in Chapter Six, where I examined positive and negative changes in disaster workers and funeral directors, but this time turning more to the existential literature, and focusing squarely on the question of one's attitudes toward death. The findings from this study indicated that certain death attitudes were associated with growth, and provided initial evidence for this novel line of enquiry. Further, they indicated the important role of cognitive processing in this population, and again showed no associations with social support, a finding consistent with the literature in the area.

Chapter Seven adopted a much more explicitly existential approach to the question of adversarial growth, and examined the role of three of Yalom's ultimate existential concerns - death, isolation, and meaninglessness – as well as testing aspects of the new organismic valuing theory of growth through adversity developed by Joseph and Linley (in press). Using samples of churchgoers, members of the general population, and funeral directors, these studies showed that fear of death and death avoidance attitudes were typically associated with more negative changes and fewer positive changes. Further, they suggested mediating relationships between death fears, and meaning in life and need satisfaction in relationships, on negative changes and psychological well-being. However, there was no evidence for mediating relationships on positive changes, again leaving open the question of the process and mechanism of adversarial growth.

8.1.1 Strengths and Limitations of the Thesis

Overall, these several studies have made a substantial original contribution to the state of knowledge about adversarial growth, but the fact cannot be disguised that there remains much work to be done before we may consider that we have a comprehensive understanding of this phenomenon and how it operates. Following the recommendations made in the literature review (Chapter 2; Linley & Joseph, 2004b), the thesis explored novel variables, potential mediating relationships, and used longitudinal designs, often with diverse populations, in order to advance the state of knowledge of adversarial growth. This aim has been largely achieved, but it cannot be denied that many questions remain, the most pertinent of which I go on to address below.

Particular strengths of the thesis are in the comprehensive review of the literature, the range of samples used, the advanced nature of some of the analyses, the investigation of novel variables, and the systematic nature of the studies conducted. The literature review provided a systematic and comprehensive assessment of the state of knowledge of adversarial growth. It was a very timely undertaking, being conducted when the field was burgeoning rapidly, but when no such systematic and comprehensive analysis had been conducted. The value of this review is evidenced by the fact that it was consistently the most downloaded article from the *Journal of Traumatic Stress* website from the time of its publication until six months later, when it moved to second position, where it remains at the time of writing. With research in the area now expanding rapidly,

the review provided a firm foundation from which subsequent investigations may proceed.

The thesis as a whole represents one of the most systematic investigations of adversarial growth of which I am aware. It draws from a wide variety of samples (i.e., college students, people who have been severely traumatised, therapists, funeral directors, disaster response workers, churchgoers, and members of the general population), and investigates variables that have not, to my knowledge, been considered in relation to adversarial growth (i.e., emotional intelligence, death attitudes, meaning in life, need satisfaction in relationships), using methodologies (e.g., mediation analysis) described by other researchers as "virtually nonexistent" within the literature in this area (Frazier et al., 2004, p. 21). Taken together, these samples, measures, and methodologies have been used to address anomalies in the literature (i.e., why higher levels of distress tend to be associated with higher levels of growth; how emotions are used effectively in coping with distress and in the facilitation of growth); to test further existing theoretical models of growth (i.e., Schaefer & Moos, 1992, 1998; Calhoun & Tedeschi, 1998); to document systematically the phenomenon of adversarial growth and salient variables associated with it in populations vicariously exposed to the suffering of others (i.e., therapists, disaster response workers, funeral directors); to investigate the role of positive changes in predicting subsequent psychological distress (showing that in a diverse sample suffering chronic psychological distress, reported positive changes predicted lower distress six months later); and to develop and test novel and original theoretical approaches to

understanding adversarial growth (i.e., the role of Yalom's ultimate existential concerns; the organismic valuing theory of growth).

However, despite its many strengths, the thesis is obviously not without limitations. The most obvious of these is the reliance on self-report questionnaire methodologies. While I do not consider the validity of such self-reports to be unduly problematic (a point discussed further below), there is clearly a need for more variability in research design if such questions are to be answered comprehensively. For example, as documented so influentially by Campbell and Fiske (1959) in their multitrait-multimethod model for research design, adversarial growth researchers should extend their methodological repertoires beyond simple self-report questionnaires. Ways of doing so include the use of qualitative interviews, which should prove especially useful in generating novel areas for investigation (e.g., Massey et al., 1998; Parappully et al., 2002); using biological markers to support self-reports of growth (e.g., Epel et al., 1998); drawing on peer-report to validate self-reports (e.g., Park et al., 1996; Weiss, 2002); using a variety of measures of the growth construct (see Chapter 2); and assessing both positive and negative aspects of change (see Chapter 2). These last two recommendations were followed within the research reported here, with tangible benefits. Both the Changes in Outlook Questionnaire (Joseph et al., 1993) and the Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996) were used to assess growth, often with differing associations with other measures, despite being reliably intercorrelated. This points to the possibility that they may measure different aspects of the growth construct, and it has been argued previously that

the CiOQ may assess more existential elements of growth (Linley et al., in press). Further, the CiOQ measures both positive and negative changes, and while also controlling for response bias (an important consideration in itself), this measurement strategy also allows consideration of the association between positive and negative changes, thus addressing the issue of the bipolar or bivariate nature of these changes (see Chapter 2).

A further fundamentally important issue here is that of nomothetic versus idiographic research design (cf. Saakvitne et al., 1998). Nomothetic research designs tend to be quantitative in nature, and seek to establish general laws that hold across a wide range of people; however, in doing so, nomothetic designs may miss subtle inter and intra-individual variations. Idiographic research designs, by contrast, tend to be qualitative in nature, and seek to understand the complexity of a given individual and their experiences; however, in doing so, idiographic designs may not easily generalise more broadly. The thesis has taken a nomothetic stance, examining general laws that hold across groups of people, and thus permit reasonably reliable generalisability. However, this nomothetic approach does not easily lend itself to clinical applications, where an idiographic, individually-focused stance is more appropriate, and it further may mask substantial inter- and intra-individual variations that would be especially salient within clinical settings (cf. Affleck, Tennen, Urrows, & Higgins, 1994). As such, while the work of the thesis contributes to the nomothetic level of understanding, it may be argued legitimately that it misses the idiographic level. This issue is addressed more fully in the Clinical Implications and Applications section below.

Finally, there remains the elusive "gold standard" of adversarial growth research: fully prospective longitudinal design methodologies. Such research approaches would be enormously resource-intensive, requiring the longitudinal monitoring of a very large sample of participants who may be traumatised at some future time, measuring their baseline reports and then periodically re-assessing these measures, before ultimately selecting out those people who had been subsequently traumatised and considering what their baseline pre-event scores could predict in relation to their post-trauma experiences. This issue is common to traumatic stress research (Norris, 1996), and obviously precluded their use here. However, while the "gold standard" may be near impossible to achieve, certain approximations are possible. For example, in the thesis I have used longitudinal designs employing a six month follow up with people who had been severely traumatised (Chapter 4), and have also drawn from research samples of therapists (Chapter 5), disaster response workers (Chapter 6), and funeral directors (Chapters 6 and 7). More generally, it would make sense to recruit at baseline new recruits to professional services that would likely face trauma (e.g., military personnel), or at least who may likely be exposed to the trauma of others (e.g., emergency services personnel, disaster response workers, therapists, emergency medical practitioners). Such populations may lend much needed methodological rigour to future work in this area. Second, it can sometimes be possible to recruit pre- and post-event populations by chance (e.g., Fredrickson et al., 2003), and the value of such opportunities should be capitalised upon.

8.1.2 The Validity of the Adversarial Growth Construct

There also remains the question of whether adversarial growth is a "positive illusion" (Taylor & Brown, 1988), and if so, whether the construct itself, and measurement of it, could ever be considered valid and reliable. As was argued in the literature review, we believed these concerns to be overstated, and subsequent work by other researchers has consistently supported this position (Dohrenwend et al., 2004; Frazier et al., 2004; Krinsley et al., 2003), with some researchers going so far as to say that reports of growth may even be *understated* by current methodologies (Smith & Cook, 2004). The view that adversarial growth is a valid phenomenon is further supported by the predictive validity of adversarial growth in studies using longitudinal designs (e.g., Chapter 4; Frazier et al., 2004; Sears et al., 2003), which goes a long way towards indicating tangible outcomes that underpin the validity of the phenomenon.

Despite this, some authors have maintained that growth is a self-serving bias because it cannot be validated by third party report (McFarland & Alvaro, 2000). However, growth studies have not found this, in contrast, reporting moderate but reliable correlations between self- and peer-reports of growth (Park et al., 1996; Weiss, 2002). Given the intrapsychic nature of aspects of the growth phenomenon, these correlations are impressive, and further support the validity argument. However, much as was the case with PTSD, it is possible that biological and physiological evidence may provide further insights, a point that is addressed more fully below in the section on future research directions. Overall,

in this thesis I have explicitly adopted and argued the position that adversarial growth is a valid phenomenon, and there has been nothing in my work that has led me to question this position in any substantive way. Rather, in examining my own findings, and in talking to people about their growth experiences, I find myself on an even firmer foundation in support of this view.

8.2 Future Research Directions

The field of adversarial growth remains in its infancy, and despite a substantially growing body of research, the opportunities for future directions remain myriad. I focus here on what I believe to be some of the more interesting directions that future research may take, particularly with regard to research directions that may point to clinical implications and applications, a subject I discuss more fully below.

8.2.1 Neglected Populations in Adversarial Growth Research

It was noted in Chapter 2 (Linley & Joseph, 2004b) that the review did not identify a single study that had addressed the question of adversarial growth in children. However, that is now beginning to change, and studies are starting to emerge in this area. For example, Salter and Stallard (2004) recently reported posttraumatic growth in child survivors of road traffic accidents, and I am also aware of other research, as yet unpublished, which is proceeding at the present time. However, just as there remain many open questions of adversarial growth in

adult populations, so there are the same, and more, open questions in work with children.

Similarly, despite an extensive literature on vicarious traumatisation, there is very little research that systematically addresses the question of adversarial growth in people following vicarious exposure. My own work has led to two of the first studies in this area, with British television viewers of the September 11 terrorist attacks (Linley et al., 2003) and with trauma therapists (Linley et al., in press). The subsequent research contained within this thesis has presented a more comprehensive coverage of the factors that may influence adversarial growth in therapists (Chapter 5) and disaster workers and funeral directors (Chapter 6; Chapter 7). However, there clearly remains a considerable amount to do in fully understanding the processes and mechanisms of adversarial growth following vicarious exposure, and there remain a number of populations where this attention could be directed: For example, emergency services personnel (ambulance, fire, police); medical professionals; and even journalists.

8.2.2 Positive Emotions and Adversarial Growth

It was found consistently in the studies reviewed in Chapter 2, as well as the empirical research reported in Chapter 6, that positive affect was associated with adversarial growth. This, in itself, is not surprising: We should expect that people who are experiencing adversarial growth are likely to experience more positive affect. However, this finding, combined with theoretical developments in other

areas, point to intriguing but as yet unexplored possibilities as to some of the potential mechanisms of adversarial growth.

For example, Fredrickson and colleagues (e.g., Fredrickson, 1998; Fredrickson et al., 2000; Fredrickson et al., 2003; Tugade & Fredrickson, 2004) have developed the "broaden-and-build" model of positive emotions, and have shown what they refer to as the "undoing effect" of positive emotions: The experience of positive emotions serves to "undo" the cardiovascular and physiological effects of negative emotions. Extrapolating this to adversarial growth, it might be hypothesised that the positive affect engendered by growth serves to undo the effects of psychological distress, an intuitively appealing hypothesis that would fit with, and help to explain, the finding in Chapter 4 that reported positive changes predicted lower psychological distress six months later. This perspective is also supported by the single biological study of adversarial growth of which I am aware: Epel et al. (1998) demonstrated that women who reported growth demonstrated faster cortisol habituation in response to a laboratory stressor, and suggested that positive adaptation to an earlier trauma may facilitate resilience against subsequent stress. Specifically in relation to such a question, Fredrickson et al. (2003) showed that positive emotions were the active ingredient in resilience against posttraumatic stress symptoms. They showed that, over time, people who experienced higher levels of positive emotion were more resilient against negative effects following the September 11 terrorist attacks. Clearly, although very much preliminary, the juxtaposition of these findings suggests that positive emotions may be a key ingredient in the experience of adversarial growth. While research is

needed to document these suggestions more fully, it is possible to hypothesise that positive emotions engender physiological reactions that may undo the negative physiological effects of trauma. As such, the experience of growth may facilitate positive emotions that then trigger these effects, leading to positive upward spirals of adaptation. This would seem to account for the somewhat contradictory finding that growth can mitigate the symptoms of posttraumatic stress, but that relieving posttraumatic stress symptoms does not de facto lead to growth (Frazier et al., 2001) (i.e., growth facilitates positive emotions which undo posttraumatic stress symptoms; reducing posttraumatic stress symptoms does not necessarily facilitate positive emotion, or if it does, these positive emotions do not necessarily lead to growth).

8.2.3 Posttraumatic Stress and Adversarial Growth

A key question that follows from this concerns the relationship between posttraumatic stress and adversarial growth. Are they bipolar constructs, at opposite ends of a single continuum? Or are they bivariate constructs, independent from each other and hence having a range of possible associations? In Chapter 2 I concluded that the two constructs were bivariate, and that position appears more firmly supported than ever. As I began to illustrate above, we are just beginning to understand how it may be that the facilitation of growth can serve to undo distress, but the alleviation of distress does not automatically lead to growth. This is a fundamental indication of the bivariate relationship between the two constructs, and the possible operation of other, as yet undefined constructs.

Further developments in this area are to be found in the organismic valuing theory of growth proposed by Joseph and Linley (in press). This makes the novel distinction that posttraumatic stress may be best understood from a perspective of subjective well-being (i.e., the affective dimension), whereas growth may be best understood from a perspective of psychological well-being (i.e., the existential engagement dimension). Importantly, while subjective well-being and psychological well-being are typically correlated, they are not always so, pointing to their independence as psychological constructs (Keyes et al., 2002). This finding mirrors that which is proposed for the relationship between posttraumatic stress and adversarial growth.

8.2.4 Evolution, Biology, and Memory in Adversarial Growth

An area very much neglected within adversarial growth research is that of evolutionary and biological perspectives on growth, as well as the role of memory in adversarial growth. Recently, some theorists have offered preliminary speculations on the evolutionary and biological basis for adversarial growth. For example, Christopher (2004) has argued that growth is the *normal* outcome of exposure to a stressor, and that psychopathology is the result of a maladaptive modulation of the stress response, a view which accords with much of the wider literature on suffering (Linley, 2000). Further, Christopher (2004) argues that trauma always leaves an individual transformed, on each of the biological, psychological, and social levels, again speaking to the breadth of adversarial

growth outcomes. There are also converging views from each of the biological, psychological and social perspectives that a natural stress response may be to seek out social relationships (Taylor et al., 2000), something which would underpin the greater valuing of relationships found within adversarial growth and the role of close relationships as a defence against the ultimate existential concern of isolation (see Chapter 7). However, these perspectives remain early in their development, and there is considerable scope for further development.

The same can be said for consideration of the biology of adversarial growth. As noted, there is but a single study of which I am aware that documents biological correlates of growth: Epel et al. (1998) showed that women who reported growth showed faster cortisol habituation to a laboratory stressor, indicating that earlier positive adaptation was associated with later resilience against subsequent stress. Although preliminary, this finding would appear to have important clinical implications, and points to a possible "toughening" role for adversarial growth (cf. Dienstbier, 1989). As such, there would seem to be merit in pursuing research into the biological substrates of adversarial growth, and trying to identify biological markers for the phenomenon: Such a programme could also be integrated with the positive emotions theory described above, as well as drawing from the extensive literature on the psychobiology of PTSD (e.g., van der Kolk et al., 1996).

Although much of trauma is concerned with memory, this has not been addressed from the perspective of adversarial growth (∅rner, personal communication, October 2000). Indeed, I am not aware of any work that has considered the role of

memory in adversarial growth, except if one takes the view that self-serving biases in memory form the basis of adversarial growth reports (cf. McFarland & Alvaro, 2000), which I do not. One way in which investigations in this area could be operationalised would be through the consideration of the role of situationally accessible memories and verbally accessible memories (Brewin, Dalgleish, & Joseph, 1996) within adversarial growth. For example, it would seem plausible that growth functions as part of the verbally accessible memory network, and it may be that situationally accessible memories serve to disrupt this functioning. However, this remains extremely speculative, and the need for future theoretical development and empirical exploration is clearly warranted.

8.3 Clinical Implications and Applications of Adversarial Growth

Adversarial growth, above all, is about the human capacity to overcome, grow, and develop through trauma and adversity. As such, a fundamental application of knowledge in this area is within the clinical context of those practitioners who are working to alleviate the distress and/or facilitate the growth of people following trauma and adversity.

This thesis has contributed to knowledge in this area in three distinct ways: first, by showing that emotional intelligence may be a key variable in the experience of adversarial growth; second, by showing that positive changes predict lower psychological distress six months later; and third, by showing that therapists

themselves working with the suffering of others may experience adversarial growth, and that a core variable here may be the bond of the therapeutic relationship.

8.3.1 Emotional Intelligence and the Facilitation of Adversarial Growth

Chapter Three showed that emotion-focused coping mediated the effect of emotional distress on adversarial growth, and further that emotional intelligence was a stronger predictor of growth than emotion-focused coping. This would seem to imply that emotions are central to the experience of growth, as stipulated within theoretical models of growth (Calhoun & Tedeschi, 1998; Schaefer & Moos, 1992, 1998), and further, that emotional intelligence may be the one of the key variables here. Emotional intelligence refers, in part, to the appropriate recognition and regulation of emotions, and it would seem logical that this element is, for some, a core component process for the experience of growth.

From an applied clinical perspective, however, emotional intelligence may provide a point of therapeutic value in the facilitation of growth. It is broadly accepted that emotional intelligence can be "learned" (Salovey, Caruso, & Mayer, 2004), and as such, this raises the possibility that the therapeutic development of emotional intelligence may be used as one process for the subsequent facilitation of adversarial growth. However, this is a possibility and nothing more, since it remains to be seen whether the development of "post-event" emotional intelligence would have the same effect on growth as pre-existing emotional

intelligence. More fundamentally, there is also a need to replicate these findings, and more fully to document the possible processes through which emotional intelligence may influence adversarial growth. Again, there is scope here for theoretical integration with the broaden-and-build model of positive emotions as applied to adversarial growth.

8.3.2 Adversarial Growth and the Prediction of Psychological Distress

If adversarial growth can be demonstrated to undo the effects of psychological distress following trauma in some people – and there are very early indications that this may be the case (Chapter 4; Frazier et al., 2001) – then the clinical facilitation of adversarial growth may yield considerable therapeutic value in helping therapists to alleviate the suffering and distress of their clients (Bretherton & Ørner, 2001; Calhoun & Tedeschi, 1999; Linley & Joseph, 2002; Tedeschi & Calhoun, 2004). From an applied perspective, this would seem to be the area in which research efforts and resources should be most intensively focused.

As was shown in Chapter Four, reported positive changes predicted fewer negative changes and less psychological distress six months later, over and above the initial level of negative changes and psychological distress, in a heterogeneous sample of people who had been severely traumatised. While this finding was non-significant when time was entered as a covariate, this is likely due to problems of statistical power: The sample size for this study was only 40 people, and time itself was unrelated to measures of positive change, negative change, and

psychological distress. However, to interpret this finding with confidence requires replication with a much larger sample that would ideally allow both cross-sectional longitudinal and prospective longitudinal work (i.e., comparing longitudinal samples within the study population, and comparing both pre- and post-event samples).

Even acknowledging the need for replication, this finding points to the therapeutic value of adversarial growth in mitigating the effects of psychological distress. As such, there may be substantial scope to focus research resources on the investigation of how these processes operate, since if clinicians are able to work with their clients in the facilitation of growth, this may provide a powerful process through which they can simultaneously reduce their clients' psychological distress. Some early case studies in the area have provided excellent illustrations of how this may occur in clinical practice (Bretherton & ∅rner, 2001).

There is a need for more case studies demonstrating the facilitation of adversarial growth, thus employing the idiographic method for the generation of novel directions for subsequent nomothetic research (e.g., Massey et al., 1998). It is also the case that idiographic research may be most informative to a given clinician who is more interested in the client sat in front of him or her, than in general laws about more abstract groups of people (Saakvitne et al., 1998).

8.3.3 Therapists and Adversarial Growth: Vicarious Processes

With considerable attention paid to the deleterious effects that trauma work may have on some therapists, there is a need to balance these investigations with a consideration of the possible positive effects of working therapeutically with people following trauma and other adversity, and in situations of psychological distress more generally. This was something that was addressed in Chapter Five, which systematically documented adversarial growth in therapists, and indicated several variables that were associated with the experience of growth. The strongest of these associations was with the therapeutic bond between a therapist and their clients, and pointed to the therapeutic bond as a possible empathic channel through which a therapist could be influenced positively by the distress of their clients.

This is an important area for research, since in working with people dealing with distress, it is incumbent upon us to ensure that we are doing the best we can to support those who are providing this service. The vicarious traumatisation literature provides one perspective on how we may do this, but the adversarial growth literature provides quite another. By one, we can learn who is at risk from the possible negative effects of therapy work; by the other, we can learn who is more likely to benefit from this work, and indeed something of how this process of growth may be engendered.

8.3.4 The Therapeutic Stance and Adversarial Growth

A fundamental question for any practitioner in working with survivors of trauma and other adversity is that of the most appropriate therapeutic stance. What are the most effective treatments for PTSD? This was the question that the International Society for Traumatic Stress Studies set out to answer in their influential volume of the same title (*Effective Treatments for PTSD*; Foa et al., 2000), concluding broadly that cognitive-behavioural therapies and eye movement desensitisation and reprocessing (EMDR) were "effective."

However, the very nature of this question implicitly assumes that the therapist is "expert" and should "intervene." Should we adopt the same therapeutic stance in the facilitation of adversarial growth? Implicit within this question are a different set of fundamental assumptions, and they point us in a very different direction. As Calhoun and Tedeschi (1999) spelled out, growth cannot be forced on the client; at best, we as therapists can act as co-travellers in exploring the experiences of the client as they find their own growth, noting and labelling the positive outcomes that they may report, but never raising the notion of growth as an expectation (see also Tedeschi & Calhoun, 2004).

The organismic valuing theory of growth through adversity, recently developed by Joseph and Linley (in press) also points to a very different set of fundamental assumptions about human nature, and as such, about how therapists might proceed in the facilitation of growth in their clients. The organismic valuing theory draws

from the person-centred theory of Carl Rogers (e.g., Rogers, 1959; 1961; 1964), and proposes that inherent within each of us is as organismic valuing process, of which the completion tendency described by Horowitz (1986) is a part, and which guides us to reconstruct our posttrauma world in ways that would be described as adversarial growth. Reviewing a wide body of literature from the positive psychological perspective, Joseph and Linley (2004) showed how this organismic valuing process could be consistently identified in diverse studies using diverse methodologies, and pointed to the central role of intrinsic motivation in well-being. They concluded that there was substantial evidence in support of the organismic valuing process, and pointed to the implications of this for therapeutic approaches in general, as well as noting that this approach had been used previously to describe the implications of this therapeutic stance for working with posttraumatic stress disorder (Joseph, 2004). The essence of their hypothesis was that people know their own best directions, and therefore the role of the therapist is to assist the client in hearing the "inner voice" which guides them towards these healing, constructive, growthful directions.

I find myself in very much a much similar position when thinking about the clinical implications and applications of adversarial growth, and what this means for the therapeutic stance of the clinician. Growth is not something to be "treated"; we cannot "intervene" to make people "grow." Rather, the therapist should endeavour to facilitate the client in following their organismic valuing process, providing an appropriately supportive and validating social environment,

so that the person can allow their inner voice to be heard, and then harness the power of this intrinsic force for healing and personal growth.

8.4 In Conclusion: The Mysteries of the Human Spirit

Overall, one is left with a sense of the mystery that adversarial growth remains. However, the work of this thesis has gone a long way towards proposing and investigating novel psychosocial variables that may be associated with adversarial growth. It has produced original research findings and explored potential clinical implications of the work, as well as pointing out the most inviting of directions for future research. But quintessentially it has demonstrated the strength and resilience of the human spirit when faced with adversity, and again calls upon us to recognise the awe and wonderment we should feel in the presence of those who use their trauma for personal and social transformation.

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Note. References marked with one asterisk indicate studies identified through the database searches described in Chapter Two. References marked with two asterisks indicate studies identified through our further literature search strategies that are also included in the review presented in Chapter Two.

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